



सत्यमेव जयते



Annual Public Health Report of the Province of Assam for the year 1945

By

MAJOR T. D. AHMAD, B.A., M.B., CH.B., D.P.H., D.T.M. & H., Indian Medical Service,
DIRECTOR OF PUBLIC HEALTH, ASSAM

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CHAPTER I

Meteorology, Economic Condition

1. *Meteorology*.—Climatic conditions did not show any marked variation from normal during any period of the year. Rainfall during the monsoon period was about normal but was in excess during the pre-monsoon and post-monsoon periods. The total rainfall was 105·99 inches during 1945 as compared to 96·18 in 1944 and 103·55 in 1943. The seasonal distribution of rainfall was as follows:—

		Actual rainfall during 1945	Departure from normal	Actual rainfall during 1944
Cold weather period (January and February)	...	2·95	+·65	2·49
Hot weather period (March to May)	... ..	25·11	—·58	25·42
Monsoon period (June to September)	... ..	69·73	+2·57	62·37
Retreating monsoon period (October to December)	...	8·20	+1·70	5·90
Total	... ..	105·99	+4·34	96·18

Compared to last year, average rainfall was higher in the districts of Cachar, Goalpara, Kamrup, Nowgong, Lakhimpur and Sylhet.

During the monsoon, local flooding occurred in all the plain districts excepting Lakhimpur, Sibsagar and Nowgong. In Goalpara district flood level reach the highest record of 1938, and in Sylhet, Kamrup and Darrang districts it also reached a high level. A cyclonic storm affected Goalpara district during the last part of October causing unusually wet weather.

As a result of floods, there was some damage to crops in various parts of the Province.

2. *Economic conditions, etc.*—The statement below, compiled from figures published in the *Assam Gazette*, gives the average quantity of common-rice sold per rupee during 1945, during the previous 4 years and the pre-war quinquennial average (1936-40).

Districts	1936-40	1941	1942	1943	1944	1945
1	2	3	4	5	6	7
	S. ch.	S. ch.	S. ch.	S. ch.	S. ch.	S. ch.
Cachar	12 6	7 12	6 13	2 11	2 1	3 4
Sylhet	11 7	7 5	6 5	2 8	3 3	3 8
Goalpara	10 12	6 14	7 9	2 8	2 7	3 2
Kamrup	10 14	7 10	7 1	2 6	2 8	2 10
Darrang	12 6	8 7	7 8	2 10	2 8	2 12
Nowgong	12 10	7 10	7 3	2 10	2 7	3 3
Sibsagar	11 6	7 6	7 2	2 12	2 5	2 10
Lakhimpur	11 6	7 12	7 2	3 10	2 8	3 2
Average	11 10	7 10	7 1	2 10	2 8	3 4

The following statement shows the price indices of rice and the birth and death rates of Assam during 1945, during the previous 4 years and the pre-war quinquennial average. In calculating price index, 1936-40 period has been taken as “Base”, i.e., 100.

	1936-40	1941	1942	1943	1944	1945
Price index of common rice	100	153	184	444	465	358
Birth rates	27·90	26·70	21·53	19·06	16·77	16·76
Death rates	19·49	16·75	15·42	16·34	16·87	13·77

Rise in price level appears to be coincident with the fall in birth rate.

Compared to 1944, there was an appreciable fall in the price level of common rice during 1945, but it was still 3½ times higher than the pre-war level.

General economic conditions as reflected by living and health standards showed no improvement during 1945. The increased aggregate income of the province was off-set by the higher level of food prices.

Supply situation was on the whole better than the previous year, but the volume of supply remained inadequate. The distributing machinery for the essential commodities was not entirely satisfactory, especially in the rural areas.

Control of prices was more effective, and rationing system continued for all the essential commodities in the towns and partially in the rural areas.

Though there was scarcity of certain essential articles of diet, e.g., mustard oil and dals, the province continued to remain a surplus province in respect of rice.

CHAPTER II

Vital statistics

3. *Registration*.—There was no improvement in the system of collection, compilation and publication of Vital Statistics of the Province during the year 1945. The primary agents for the collection of vital events remained the same—unpaid, mostly illiterate, indifferent and unwilling. The Assam Births and Death Registration Act of 1935 is compulsory only in 27 towns of the plains districts amongst a mid-year estimated population of 291,587 out of the total estimated population of 10,063,034.

4. *Population*.—The population of the eight plains districts of Assam to which this report mainly refers was 9,417,552 according to the 1941 census. The mid-year estimated population of the same area for the year 1945 calculated by the “Arithmetic Progression Method” was 10,063,034 (5,333,706 males and 4,729,328 females). Density of estimated population per square mile during 1945 was 322 as compared to 316 during 1944. The increase in the estimated population for the year was 148,957 (79,996 males and 68,961 females) in the 8 plains districts of the province.

5. *Births and Birth-rate*.—The total number of births registered during the year was 168,632 (86,103 males and 82,529 females) as compared to 166,276 of the previous year and the quinquennial average of 211,350. The birth-rate of the Province for the year 1945 was 16.76 as compared to 16.77 of the previous year and the quinquennial average of 22.46.

The number of male births to every 100 female births was 104, the quinquennial average being 108 to 100 female births.

The comparative birth-rates of the Provinces in India are shown in the following table.

Provinces	1945	1944	1940-44
1	2	3	4
Assam	16.76	16.77	22.46
Bengal	22.10	16.14	23.40
Bihar	23.00	20.63	24.60
Orissa	27.35	25.24	...
United Provinces	27.31	25.69	29.02
Madras	28.45	29.39	34.40
Bombay	33.70	33.93	35.01
Central Provinces	39.33	37.98	38.88
Punjab	36.10	36.78	37.10
North-West Frontier Province... ..	16.74	17.17	18.14
Sind	14.33	14.94	16.42

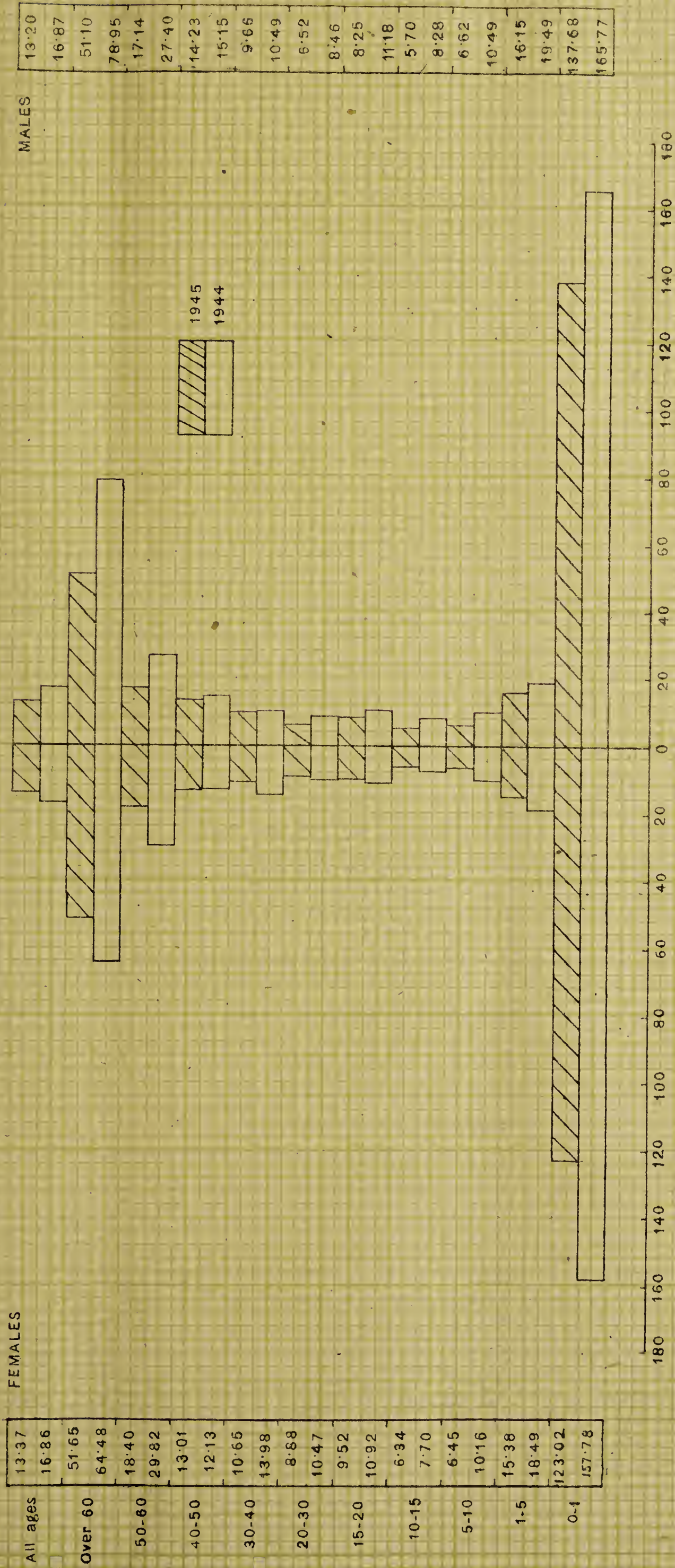
6. *Birth Registration, General*.—The yearly decline in the number of births since 1942 has been checked during 1945, but the total for 1945 is still below the quinquennial average. The following table shows the number of births in urban and rural areas for each year since 1940. The slight increase during 1945 is a hopeful sign and may be indicative of the future trend.

Year	Births in urban areas	Births in rural areas
1940	6,901	237,253
1941	7,373	245,708
1942	5,272	201,801
1943	4,877	181,287
1944	5,116	161,160
1945	5,653	162,979

It will be observed that the decline in the birth-rate coincided with the onset of war and disturbed conditions which seem to have had profound effect on family life, and that the increase in births was coincident with the cessation of hostilities on the frontiers of Assam and the improvement in the supply situation of essential food articles.

Mention must be made of the gross inaccuracy in the registration of vital events especially births which are more liable to be ignored by the unsatisfactory primary agents, though it is probable that there is not much year to year variation in the degrees of accuracy.

DEATH RATES BY AGE GROUPS AND SEX FOR ASSAM 1945



As in previous years, Cachar district recorded the highest birth-rate (23·46) and Kamrup district the lowest (11·24). The districts of Cachar, Sylhet, Darrang and Sibsagar had birth-rates above the provincial average (16·76) while the remaining four districts below it. The highest seasonal birth-rate was recorded in November (23·92) followed by December (23·21) and the lowest birth-rate was recorded in May (12·27). Seasonal birth-rates by months are given below :—

Months								1945	1944
January	...	...	...	...	...	...	...	17·89	19·60
February	...	...	...	...	...	...	...	17·71	20·79
March	...	...	...	...	...	...	...	14·98	18·01
April	...	...	...	...	...	...	...	14·47	16·80
May	...	...	...	...	...	...	...	12·27	14·30
June	...	...	...	...	...	...	...	12·95	14·17
July	...	...	...	...	...	...	...	14·08	14·10
August	...	...	...	...	...	...	...	13·24	14·30
September	...	...	...	...	...	...	...	17·65	15·10
October	...	...	...	...	...	...	...	18·86	17·67
November	...	...	...	...	...	...	...	23·92	18·21
December	...	...	...	...	...	...	...	23·21	17·82

During the year births exceeded deaths by 34,096, while the most disturbing and abnormal feature of 1944 was the excess of deaths over births by 932.

7. *Birth Registration in Urban Areas.*—The total number of births registered in the Urban Areas during the year was 5,653 (19·38 per mille of population) as compared to 5,116 (17·94) during 1944 and the quinquennial average of 5,908 (22·67). Out of 27 towns in the province, one town recorded birth-rate below 10 per mille, nine towns between 10 and 15 per mille, seven towns between 15 and 20 per mille, five towns between 20 and 25 per mille, one town between 25 and 30 per mille and four towns between 30 and 35 per mille of population. The highest birth-rate (34·56) was recorded by Sunamganj followed by Goalpara (33·01), Nowgong (32·24) and Palasbari (30·82). Haflong town recorded the lowest birth-rate (3·69) during this year.

8. *Birth Registration in Rural areas.*—The total number of births registered in rural circles during 1945 was 162,979 (16·68 per mille) as compared to 1,61,160 (16·74 per mille) during 1944, and the quinquennial average of 2,05,442 (22·46). Kalaigaon registration circle in Darrang district recorded the highest birth-rate (39·56) while Boko circle in Kamrup district recorded the lowest rate (1·41). Kamrup rural circles generally show much lower rates, probably due to defective registration.

9. *Deaths and Death-rate.*—The number of deaths registered during the year was 1,34,536 (70,419 males and 64,117 females) as compared to 167,208 of the previous year and the quinquennial average of 1,56,504. The death-rate for the year 1945 was 13·37 as compared to 16·87 of the previous year and the quinquennial average of 16·51. There was a decrease of 32,672 deaths during 1945 as compared to the previous year.

A comparative statement of the death rates of the Provinces in India is given below :—

Provinces	Death-rate			
	1945	1944	1940-44	
1	2	3	4	
Assam ...	13·37	16·87	16·51	
Bengal	21·00	29·12	24·30	
Bihar ...	20·70	22·19	18·80	
Orissa ...	28·68	30·36	...	
United Provinces	18·95	18·74	19·50	
Madras	22·27	25·40	24·78	
Bombay	26·40	25·47	24·75	
Central Provinces	39·32	30·12	30·69	
Punjab	19·40	25·26	25·40	
North-West Frontier Province	11·14	13·97	15·63	
Sind ...	10·23	11·86	12·04	

All the districts except Cachar recorded death-rates below their quinquennial average. The highest death-rates (20·00) was recorded in Cachar district and lowest (7·24) in Kamrup district. Both districts of Surma Valley recorded higher death-rates than the Assam Valley districts.

The following table gives the number of deaths reported from each district during 1945 and 1944, showing increase or decrease as compared to the previous year.

District						Deaths during 1945	Deaths during 1944	Decrease or increase in 1945
Cachar	...	...	...	...	...	12,687	15,955	—3,268
Sylhet	...	...	...	...	...	53,005	76,159	—23,154
Goalpara	...	...	...	...	...	14,831	16,872	—2,041
Kamrup	...	...	...	...	...	10,050	10,196	—146
Darrang	...	...	...	...	...	11,259	12,207	—948
Nowgong	...	...	...	...	...	6,507	7,909	—1,402
Sibsagar	...	...	...	...	...	15,576	14,627	+949
Lakhimpur	...	...	...	...	...	10,621	13,283	—2,662
Total						134,536	167,208	—32 672

The increase in the number of deaths in Sibsaagar district is attributable to the recrudescence of *Kala-Azar*, higher incidence of Fevers and prevalence of Small-pox and Cholera in the district. The decrease in the total mortality of the Surma Valley districts is mainly due to the decrease in the incidence of Malaria and Small-pox which prevailed there during the previous year.

10. *Deaths and Death-rate in Urban Areas.*—The total number of deaths registered in Urban areas during the year was 3,136 as compared to 5,038 of the preceding year and the quinquennial average of 4,085. The average death-rate in the Urban areas was 10·75 as compared to 17·67 of the preceding year and the quinquennial average of 15·38. As in last year, Sunamganj town recorded the highest death-rate (23·28) during 1945. The lowest death-rate (3·53) was returned from Mangaldai town. One town recorded death-rate below 5 per mille, 12 towns between 5 and 10 per mille, 7 towns between 10 and 15 per mille, 6 towns between 10 and 20 per mille and 1 town between 20 and 25 per mille of population.

The statement below gives the number of deaths registered under each of the 7 main heads of mortality during 1945 and 1944 :—

Causes of mortality						1945	1944	Increase or decrease during 1945
1						2	3	4
Cholera	...	...	...	...	...	70	109	—39
Small-pox	...	...	...	...	...	74	409	—335
Levers	...	...	...	...	...	1,089	1,624	—535
Dysentery and Diarrhoea	...	...	...	...	...	341	656	—315
Respiratory diseases	...	...	...	...	...	234	338	—104
Injuries	...	...	...	...	...	90	142	—52
All other causes	...	...	...	...	...	1,238	1,760	—522
Total						3,136	5,038	—1,902

11. *Deaths and Death-rate in Rural Areas.*—There were 131,400 deaths in rural areas during 1945 as compared to 162,170 during 1944 and the quinquennial average of 152,419 giving a death-rate of 13·45 during 1945 as against 16·84 during 1944 and the quinquennial average of 16·54. With the exception of Sibsaagar district, the rural areas of all districts recorded death-rates lower than those recorded in the previous year.

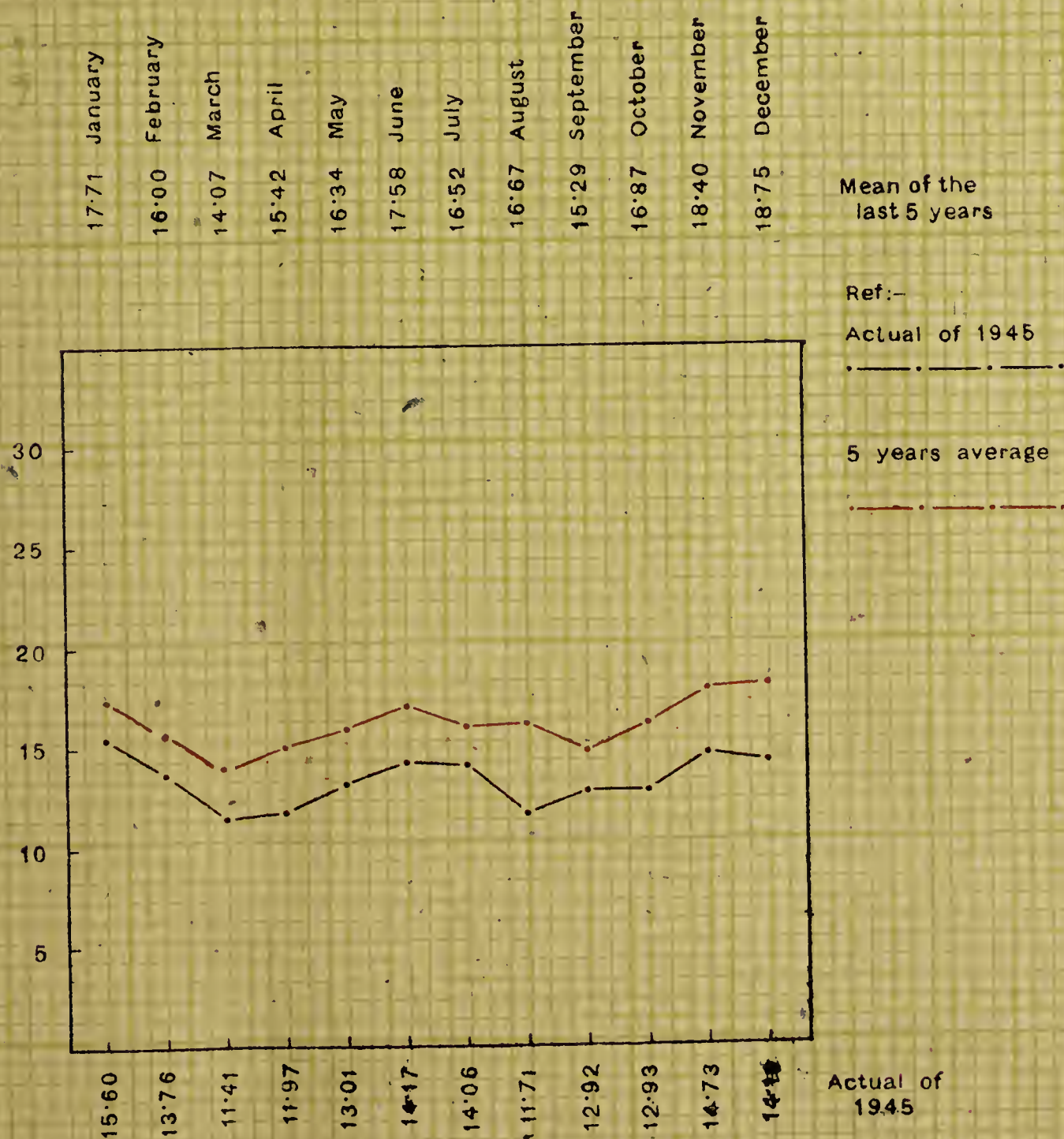
The total number of deaths in rural circles under each of the main causes of mortality during 1945 and 1944 are given below, showing increase or decrease during the year :—

Causes of mortality	1945	1944	Increase or decrease during 1945
1	2	3	4
Cholera	2,960	3,998	—1,038
Small-pox	3,764	11,319	—7,555
Fevers	86,903	102,759	—15,856
Dysentery and Diarrhoea	8,545	10,444	—1,899
Respiratory diseases	3,317	4,182	—865
Injuries	1,131	1,513	—382
All other causes	24,780	27,955	—3,175
Total	131,400	162,170	—30,770

The highest death-rate (29·40) was recorded in Jaintiapur circle of Sylhet district. Other rural circles recording high death-rates were Madhabpur (28·94), Kanaighat (26·12) in Sylhet district and Margherita (28·56) in Lakhimpur district. The lowest death-rate (1·03) was returned from Sorbhog rural circle in Kamrup district.

12. *Seasonal variations in mortality.*—Highest death-rate (15·60) was recorded during the month of January and the lowest (11·41) in the month of March 1945. The graph below shows the monthly mortality during 1945 as compared to the seasonal quinquennial average of the Province.

SEASONAL INCIDENCE OF MORTALITY IN 1945 AND THE
QUINQUENNIAL AVERAGE OF THE LAST 5 YEARS



It would be observed that the mortality curve follows the average quinquennial curve.

13. *Mortality According to Age and Sex.*—During the year a total of 70,419 males and 64,117 females died as compared to 88,629 males and 78,579 females during 1944 and the quinquennial average of 80,520 males and 73,984 females. Female death-rate exceeded male death-rate in the districts of Cachar, Kamrup, Darrang, Nowgong, Sibsagar and Lakhimpur.

The following table shows the rate of mortality by sex and age group for the years 1945 and 1944 and the quinquennial average :—

Age groups	1945		1944		Average of 1940-44	
	Male	Female	Male	Female	Male	Female
1	2	3	4	5	6	7
Under one year	137.68	123.02	165.77	157.78	148.25	135.12
1 to 5 years	16.15	15.38	19.49	18.49	17.78	16.56
5 „ 10 „	6.62	6.45	10.49	10.16	8.83	8.57
10 „ 15 „	5.70	6.34	8.28	7.70	7.17	6.30
15 „ 20 „	8.25	9.52	11.18	10.92	8.93	10.08
20 „ 30 „	6.52	8.88	8.46	10.47	8.04	11.28
30 „ 40 „	9.66	10.65	10.49	13.98	10.45	12.72
40 „ 50 „	14.23	13.01	15.15	12.13	14.86	11.88
50 „ 60 „	17.14	18.40	27.40	29.82	24.23	24.12
60 and upwards	51.10	51.65	78.95	64.48	65.39	59.90
Total ...	13.20	13.37	16.87	16.86	16.46	16.58

As usual, female death-rate exceeded male death-rate in the age groups 15 to 40 due to stress and strain of child-bearing and the inadequacy of measures for maternity relief.

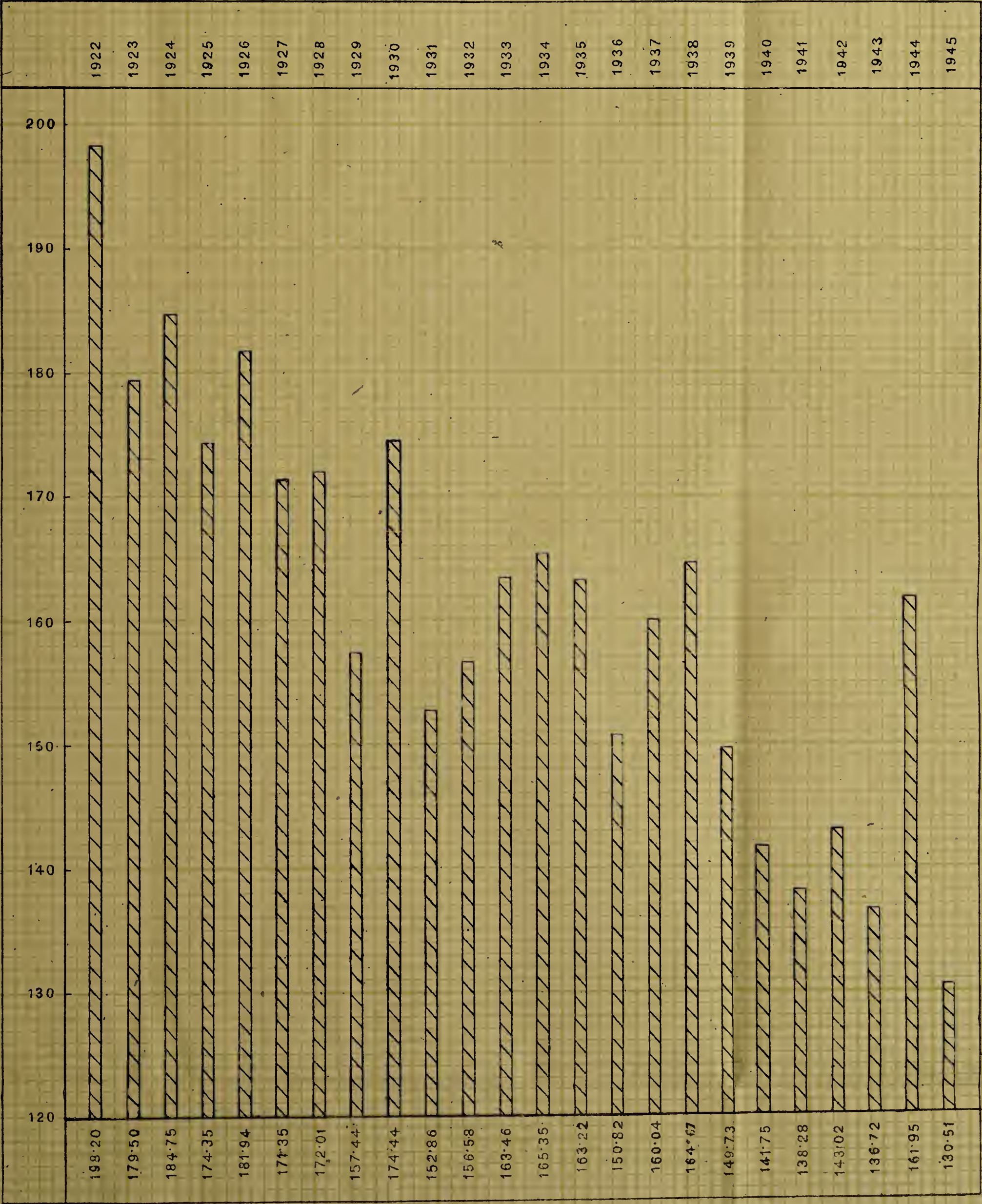
14. *Infantile Mortality.*—The following table shows the number of deaths and death-rates amongst infants calculated on live births during each year for 1945 and the previous decennium :—

Years	Births			Deaths of infants			Death-rate of infants		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8	9	10
1935	123,668	116,230	239,898	21,015	18,140	39,155	169.93	156.07	163.22
1936	123,839	115,865	239,704	19,630	16,522	36,152	158.51	142.59	150.82
1937	128,233	119,991	248,224	21,350	18,377	39,727	166.49	153.15	160.04
1938	122,346	114,834	237,180	21,074	17,983	39,057	172.25	156.60	164.67
1939	125,573	116,855	242,428	19,666	16,633	36,299	156.61	142.34	149.73
1940	126,846	117,308	244,154	18,806	15,804	34,610	148.26	134.72	141.75
1941	131,021	122,060	253,081	19,018	15,362	34,380	147.50	128.55	138.28
1942	106,832	100,241	207,073	15,279	12,992	28,271	143.02	129.61	136.53
1943	96,136	90,028	186,164	13,144	11,248	24,392	136.72	124.94	131.02
1944	87,049	79,227	166,276	14,430	12,499	26,929	165.77	157.78	161.95
1945	86,103	82,529	168,632	11,855	10,153	22,008	137.68	123.02	130.51

The infantile mortality rate showed an appreciable fall during 1945 (130.51) as compared to the previous year (161.95), but the rate for 1944 was abnormally high probably due to the cumulative effect of war conditions and scarcity of protective foods. The number of infant deaths (under one year of age) registered during the year was 22,008 (11,855 boys and 10,153 girls) as compared to 26,929 during the previous years. Infantile deaths constitute 16.4 per cent. of the total mortality in the province. Of the total infant deaths 9,519 or 43 per cent. died within one month of birth, 7,489 or 34 per cent. during the age-period 'one to six months' and 5,000 or 23 per cent. during the period 'six to twelve months'. For every 100 female births, 104 males were born and for every 100 female infant deaths 117 male infants died during the year.

CHART I

INFANT MORTALITY IN ASSAM 1922-1945



The infant mortality rate of Assam for 1945 is compared in the following table with that of the other provinces:—

Province									Infant mortality rate (1945)
Assam	...	...	...	...	...	...	...	...	130·51
Bengal	...	...	...	...	...	...	...	...	143·20
Bihar	...	...	...	...	—	...	...	...	100·10
Orissa	...	...	...	...	...	...	...	...	178·10
Central Provinces	...	...	...	...	...	...	...	...	256·68
Madras	...	...	...	...	...	...	...	...	169·43
Bombay	...	...	...	...	...	...	...	...	161·23
United Provinces	...	...	...	...	...	...	...	...	123·19
Punjab	...	...	...	...	...	...	...	...	145·00
North-West Frontier Province	...	...	...	...	...	...	...	...	116·98
Sind	...	...	...	...	...	...	...	...	103·90

During the year 6,884 still births (3,703 males and 3,181 females) were reported as against 5,900 (3,353 males and 2,547 females) in the previous year. Of these, 4,966 were Hindus, 1,466 Muslims, 157 Christians, 12 Buddhists and 283 other classes.

The percentage of still births to live births was 4·08 during the year as compared to 3·55 during 1944 and 2·99 during 1943.

15. *Mortality according to Classes.*—During 1945, 79,887 Hindus, 47,382 Muslims, 1,171 Christians, 70 Buddhists and 6,026 other classes died. The death-rates per mille by classes for 1945 and 1944 are shown in the following table.

Classes						Death-rate 1944	Death-rate 1945	Increase or decrease
Hindus	...	...	...	...	...	20·83	18·02	—2·81
Muslims	...	...	...	...	...	19·15	12·96	—6·19
Christians	...	...	...	...	...	36·57	27·74	—8·83
Buddhists	...	...	...	...	...	8·29	8·17	—·12
Other classes	...	...	...	...	...	3·03	3·12	+·09

This cannot be taken to represent a correct state of vital events by classes as communal classification as adopted in the 1941 census is not properly understood and recorded by the primary agents especially in the case of smaller communities and “other classes”.

16. *Births and Deaths in Hills Districts.*—The mid-year estimated population of the five Hills Districts for 1945 was 509,679. The table below shows birth and deathrates for 1945 and 1944 in parts of the Hills Districts where births and deaths are registered.

Districts	Mid-year estimated population under registration	1945		1944	
		Birth-rate	Death-rate	Birth-rate	Death-rate
1	2	3	4	5	6
Khasi and Jaintia Hills	77,543	14·84	9·96	14·76	10·09
Garro Hills	237,770	18·17	16·28	14·24	14·57
Lushai Hills	165,084	29·63	16·37	30·09	19·61
Naga Hills	4,323	10·64	9·02	Statistics not complete.	
Sadiya Frontier Tract	24,959	22·43	18·15	21·91	16·44

Khasi and Jaintia Hills.—The number of births and deaths recorded during 1945 in the areas under registration in Khasi and Jaintia Hills was 1,151 and 772 respectively as compared to 1,131 births and 773 deaths during 1944. There were 4 deaths from Cholera, 6 from Small-pox, 361 from Fevers, 33 from Dysentery and Diarrhoea, 24 from respiratory diseases, and 6 from injuries during 1945. A total of 27,573 cases of Malaria was treated at the Dispensaries in this District as compared to 29,466 during 1944. The total number of births and deaths registered in Shillong town during 1945 was 597 and 217 respectively as compared to 636 births and 329 deaths during 1944.

The table below shows the number of attacks and deaths from infectious diseases recorded by the Shillong Municipality during 1945.

Causes 1	State portion of Shillong Municipality		British portion of Shillong Municipality		Total	
	Cases 2	Deaths 3	Cases 4	Deaths 5	Cases 6	Deaths 7
Cholera	2	2	2	2	4	4
Small-pox	13	2	4	...	17	2
Enteric Fevers	14	4	5	2	19	6
Tuberculosis	6	6	...	...	6	6
Diphtheria	1	...	...	...	1	...
C. S. Meningitis	4	3	1	...	5	3
Pneumonia ... ..	...	...	1	1	1	1
Black Water Fever... ..	...	...	1	1	1	1
Leprosy	2	Left.	1	Left.	3	Left.

Garó Hills.—There were 4,322 births and 3,854 deaths during 1945 as compared to 3,350 births and 3,429 deaths during 1944. General health conditions in the district were not satisfactory during the year, and there was increased incidence of *Kala-azar*, Malaria, Tuberculosis and Leprosy. The total number of Malaria cases treated in all the Hospitals and Dispensaries in this district was 21,506 during 1945 as compared to 21,361 during the previous year.

Lushai Hills.—There were 4,891 births and 2,703 deaths during 1945 as compared to 4,882 births and 3,181 deaths during 1944. Of the total number of deaths, Fevers accounted for 1,469, Respiratory diseases for 743, Dysentery and Diarrhoea for 262. An outbreak of "Influenza" was reported from Aijal and its surrounding villages during 1945 with 735 cases but no deaths. The health condition in the district remained fairly satisfactory.

Naga Hills.—In this district registration was carried out in the localities of Kohima, Dimapur, Nichuguard and Kongnym only. During 1945/46 births and 39 deaths were reported. There was an outbreak of Enteric Fever in Kohima area with 269 attacks and 79 deaths and an outbreak of Small-pox in Changtongia village in Mokokchung Subdivision with 49 attacks and 2 deaths. The total number of Malaria cases treated during 1945 was 29,709.

Sadiya Frontier Tract.—560 births and 453 deaths were registered in Sadiya Frontier Tract during 1945 as compared to 541 births and 406 deaths during 1944. Of the total number of deaths, Fevers accounted for 331. During 1945, there was an outbreak of Small-pox with 140 cases and 30 deaths in Sadiya Subdivision. Anti-Malaria measures were continued during the year at Pasighat, Sadiya and Saikhowa-ghat.

Manipur State.—Births and deaths are not registered in the State. A total of 133 attacks and 69 deaths from Cholera and 93 attacks and 13 deaths from Small-pox was reported during 1945.

17. *Registration in Tea Gardens.*—The table below shows the births and deaths reported from tea estates during the year 1945 as compared to those of the preceding year.

Districts 1	Birth-rate		Death-rate	
	1944 2	1945 3	1944 4	1945 5
Cachar	21.65	24.35	24.64	22.24
Sylhet	20.61	12.56	15.38	9.91
Goalpara	14.95	23.70	11.53	12.69
Kamrup	15.37	11.12	15.49	15.56
Darrang	13.84	21.80	18.58	19.39
Nowgong	16.54	18.54	13.19	17.20
Sibsagar	27.88	20.79	17.19	17.01
Lakhimpur	21.87	23.53	20.76	17.27
Total ...	21.83	20.55	18.90	16.83

Registration in the tea estates of Sylhet district was unsatisfactory during the year. In 5 districts, viz., Cachar, Goalpara, Darrang, Nowgong and Lakhimpur, birth-rates in tea estates were higher and in 4 districts, viz., Cachar, Sylhet, Sibsaagar and Lakhimpur death-rates in tea estates were lower than those of the preceding year.

The total number of births and deaths in tea estates during 1943 was 23,486 and 19,238 as compared to 24,699 and 21,415 respectively during the previous year. The largest number of deaths was recorded under "other causes" (8,411), followed by 'Fevers' (5,197), Dysentery and Diarrhoea (3,232) and Respiratory diseases (2,098). There were 62 deaths from Cholera and 44 deaths from Small-pox as compared to 89 deaths from Cholera and 249 deaths from Small-pox in the previous year.

18. *Registration in Railway Areas.*—During 1945, 202 births and 124 deaths were reported from within railway limits of the province as compared to 208 births and 196 deaths in the preceding year.

19. *General accuracy of Vital Statistics.*—No appreciable improvement occurred in the registration of vital statistics during 1945. The Scheme for the improvement of vital statistical returns has not yet been sanctioned by Government. It is also necessary that the Assam Births and Deaths Registration Act of 1935 should be gradually made compulsory in the rural areas.

The Public Health staff carried out verification of vital occurrences in the compulsory areas and inspection of village registers in rural areas. The percentage of omission, based on 5 districts reporting omissions, was 3.4 in respect of births and 1.4 in respect of deaths during 1945. During the year a complete survey of Gauripur town with a population of about 5,000 was carried out by the Public Health staff, in order to assess the accuracy of registration. The registration of deaths was found to be correct and the slight variation in respect of births was found, on statistical test, to be insignificant.

COMPARATIVE DIAGRAM OF DEATHS BY
CAUSES FOR 1945

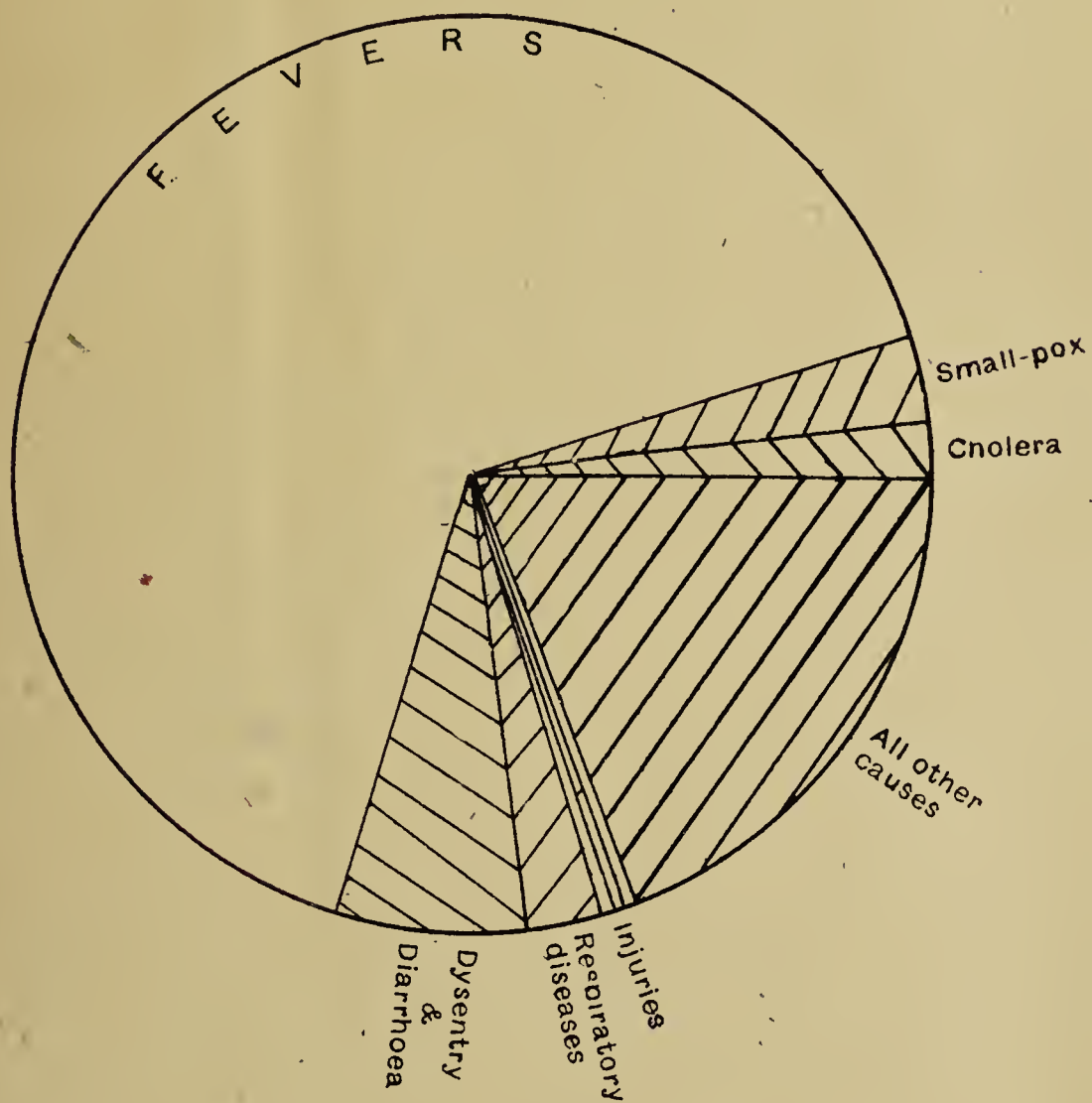
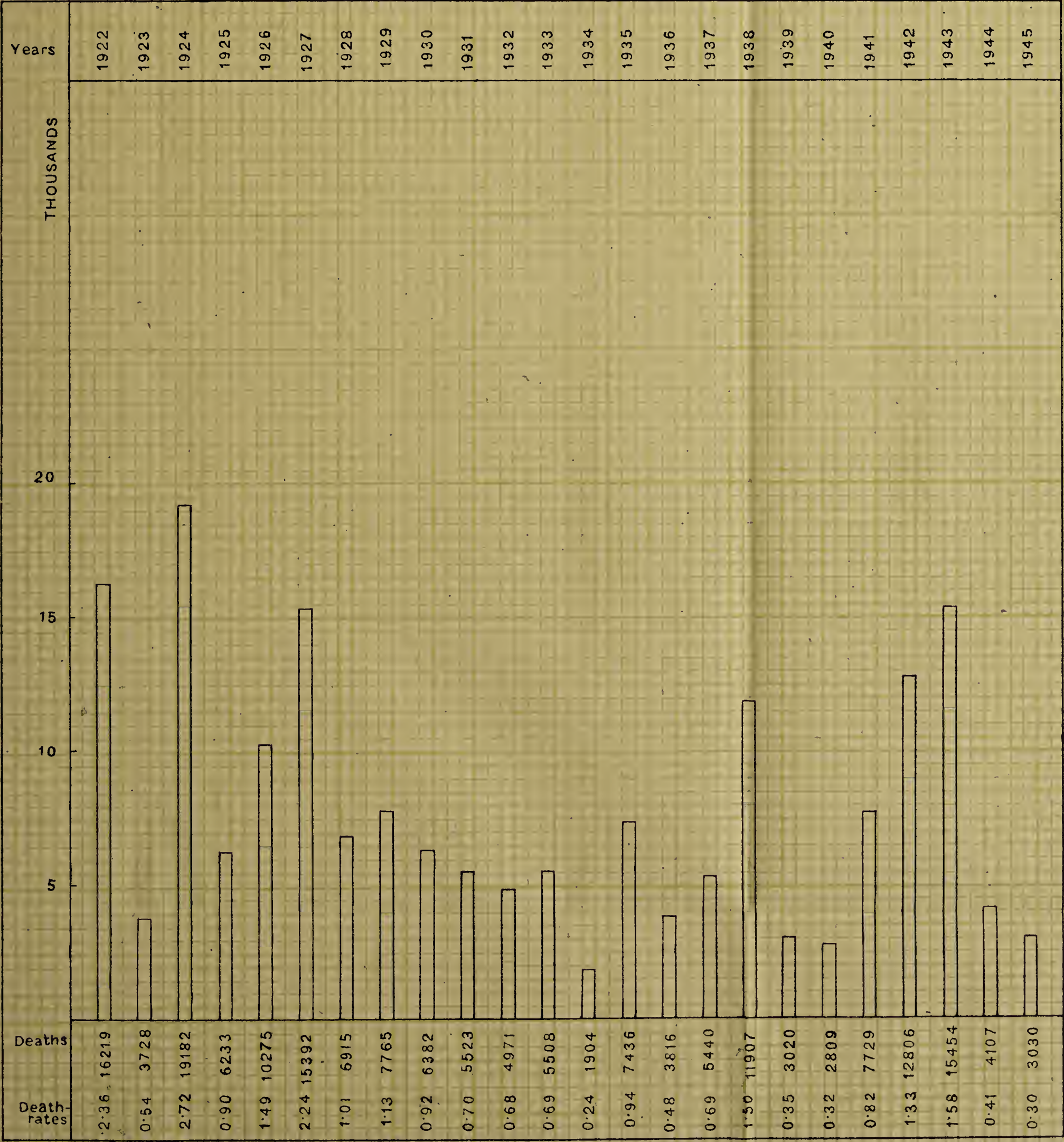


CHART II

MORTALITY FROM CHOLERA IN ASSAM 1922-1945.



20. *Emigration and Immigration*.—The only figures available are of immigrant labour population employed by the Tea Industry of Assam.

The statement below shows the number of tea garden labourers who entered Assam during 1945 and 1944.

Months						1945	1944
January	...	...	...	...	...	9,840	4,439
February	...	...	...	...	...	10,855	7,758
March	...	...	...	...	...	10,597	10,713
April	...	...	...	...	...	7,730	10,499
May	...	...	...	...	...	6,560	7,600
June	...	...	...	...	...	4,171	4,589
July	...	...	...	...	...	1,423	1,641
August	...	...	...	...	...	570	486
September	...	...	...	...	...	324	304
October	...	...	...	...	...	361	318
November	...	...	...	...	...	429	615
December	...	...	...	...	...	1,921	2,507
Total						54,781	51,469

During the year 358 cases of sickness among the immigrant labour were reported of whom 40 died.

CHAPTER III

The State of Public Health and History of Chief Diseases

A.—State of Public Health

21. The general state of public health in the Province was fairly satisfactory during the year. Deaths under all heads of mortality were less as compared to 1944. The following table shows the death-rates per mille from the chief causes of mortality during 1945 as compared to death-rates during 1944 and the previous quinquennium.

Disease	1945			1944			1940-44		
	Urban	Rural	Combined	Urban	Rural	Combined	Urban	Rural	Combined
1	2	3	4	5	6	7	8	9	10
Cholera ...	·24	·30	·30	·38	·42	·41	·55	·91	·89
Small-pox ...	·25	·38	·38	1·43	1·18	1·18	·45	·31	·31
Plague ...	Nil								
Fevers ...	3·73	8·89	8·74	5·69	10·67	10·53	4·43	10·25	10·08
Dysentery and Diarrhoea.	1·17	·87	·88	2·30	1·08	1·12	3·59	1·01	1·04
Respiratory Diseases.	·80	·34	·35	1·19	·43	·46	1·42	·47	·49
Injuries ...	·31	·11	·12	·50	·16	·17	·49	·17	·18
Other causes ...	4·25	2·56	2·60	6·18	2·90	3·00	4·34	3·12	3·55
	10·75	13·45	13·37	17·67	16·84	16·87	15·27	16·24	16·54

The death-rates were lower under all causes as compared to 1944 and appreciably lower in respect of Small-pox and Fevers.

During 1945, 2·25 per cent. of the total mortality was due to Cholera, 2·85 per cent. due to Small-pox, 65·40 per cent. due to Fever, 6·60 per cent. due to Dysentery and Diarrhoea, 2·64 per cent. due to Respiratory diseases, ·91 per cent. due to Injuries and 19·35 per cent. due to other causes.

B.—Chief Diseases

22. *Cholera*.—There was no large scale outbreak of Cholera during 1945, but small outbreaks or sporadic cases were reported from all the districts. A total of 3,030 deaths from Cholera was recorded during 1945 as compared to 4,107 during 1944 and the quinquennial average of 8,551. As in the previous year, Sylhet district recorded the highest number of deaths from Cholera (2,006 cases or 66 per cent. of the total Cholera mortality).

The table below shows the death-rate per mille due to Cholera by districts during 1945, 1944 and the previous quinquennium.

Districts	Death-rate per mille			Difference between columns (4) and (2)
	1945	1944	1940-44	
1	2	3	4	5
Cachar ...	·17	·29	·61	—·44
Sylhet ...	·61	·94	1·28	—·67
Goalpara ...	·04	·11	·71	—·67
Kamrup ...	·19	·14	·99	—·80
Darrang ...	·19	·20	·73	—·54
Nowgong ...	·16	·38	1·56	—1·34
Sibsagar ...	·28	·08	·24	+·04
Lakhimpur ...	·01	·02	·19	—·18
Total ...	·30	·41	·89	—·59

CHART III

MORTALITY FROM SMALL-POX IN ASSAM 1922-1945

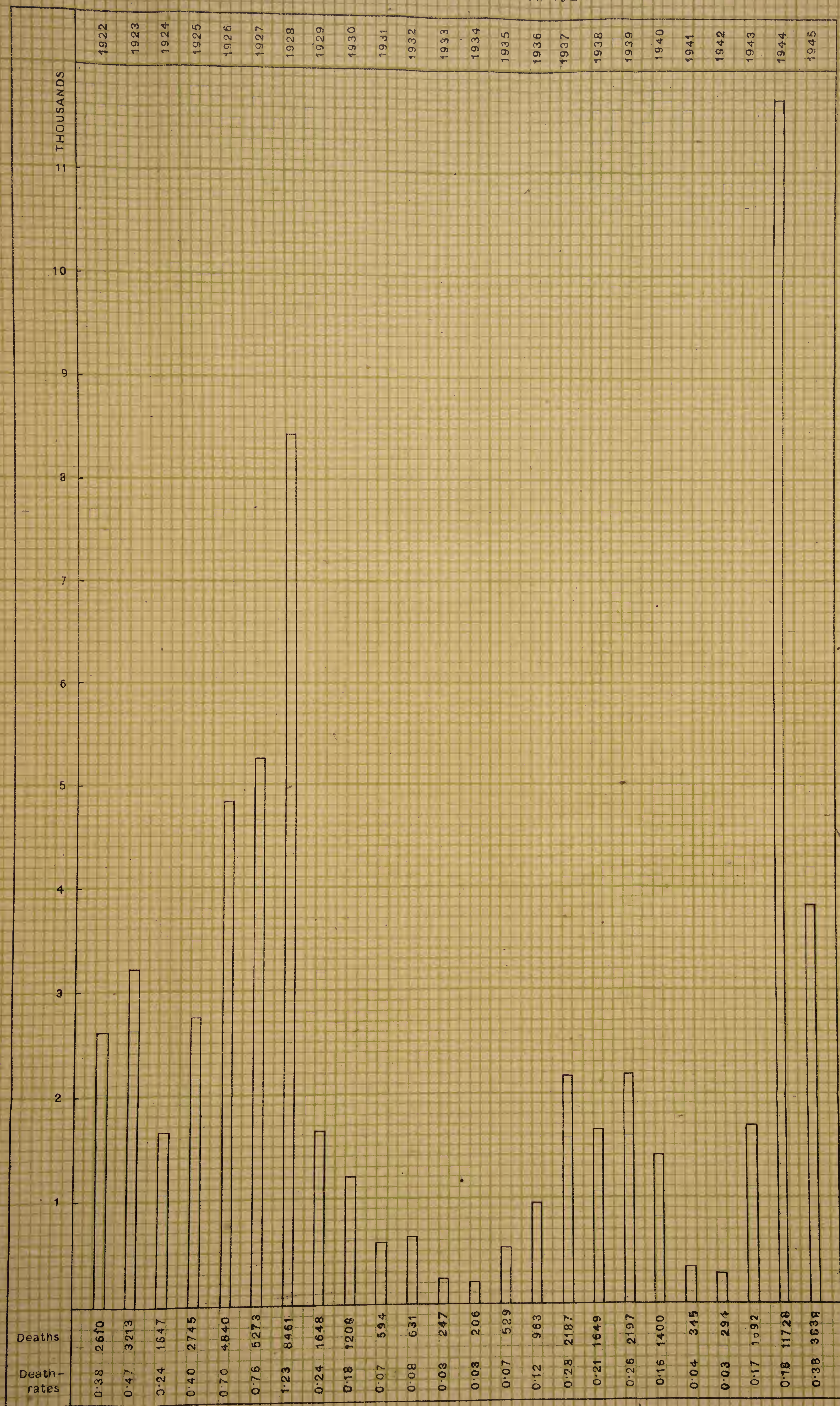
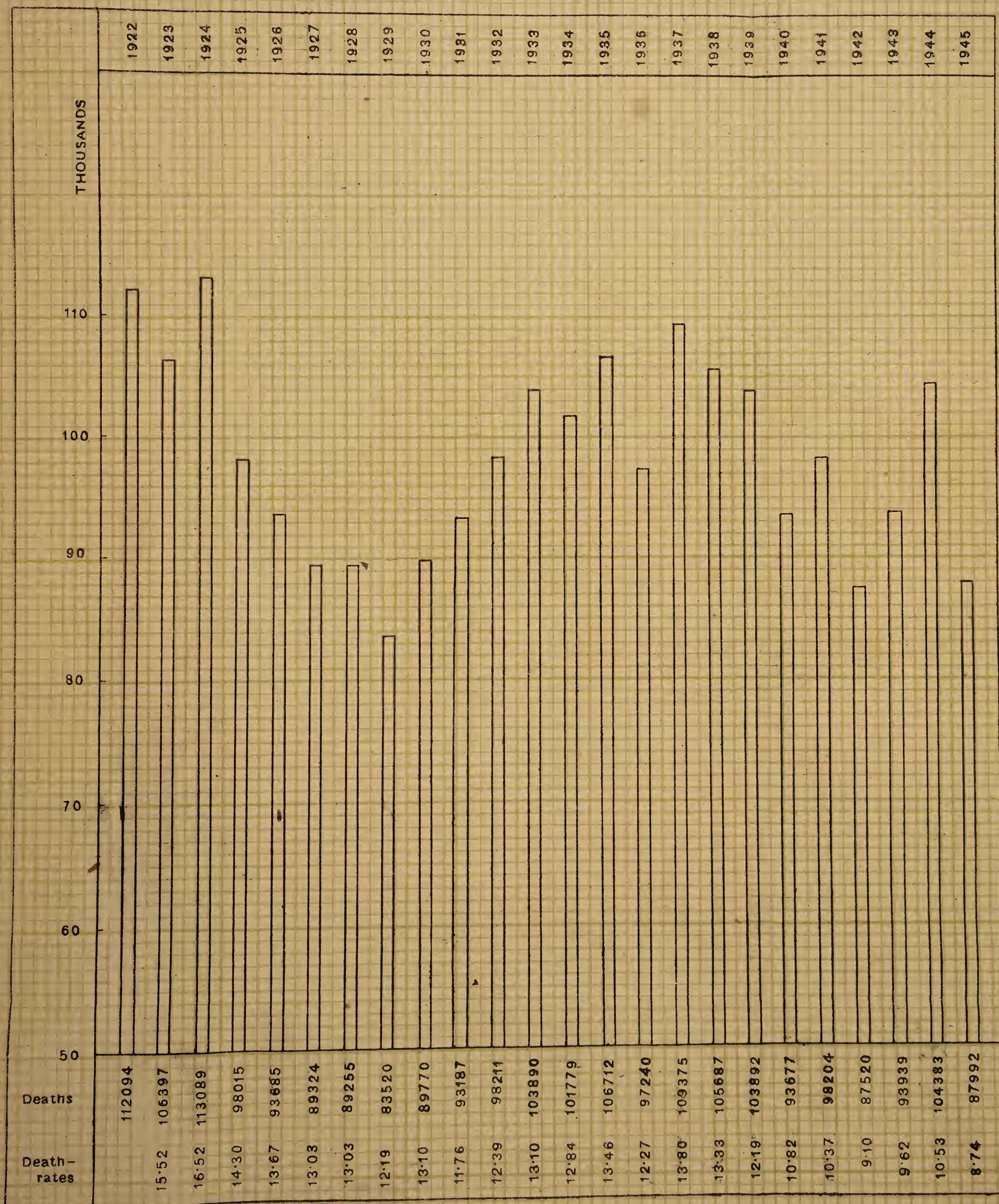
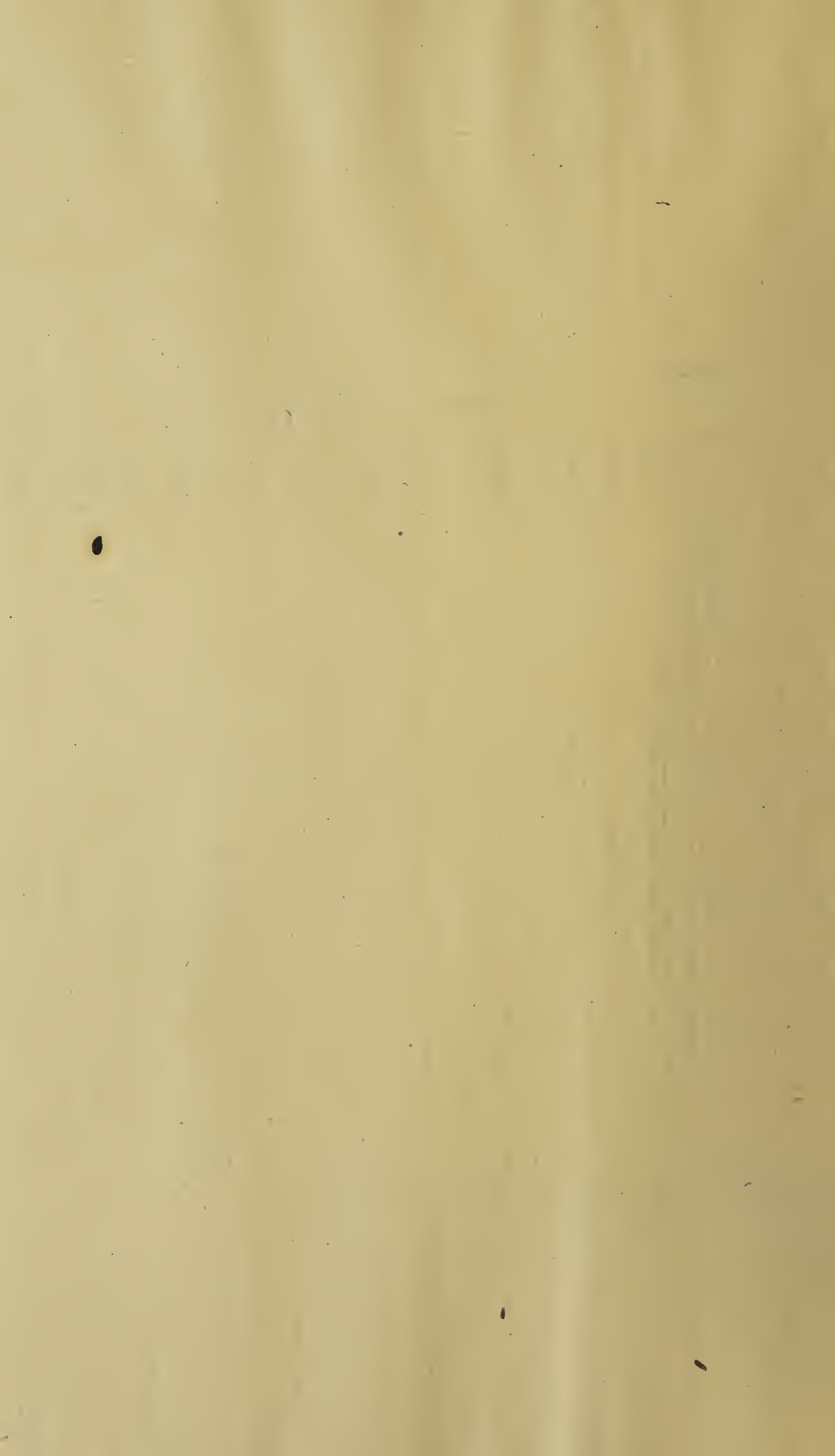


CHART IV

MORTALITY FROM FEVERS IN ASSAM 1922-1945





The incidence of Cholera was comparatively low during 1945, probably as a result of the mass immunity affected by the continuous anti-cholera inoculation carried out amongst the people of the infected areas since the last severe epidemic of 1941-43. Propaganda was also continued in order to educate the people in methods of prevention, it is satisfactory to note that Cholera inoculation is becoming more popular amongst the rural masses. During 1945, approximately 13,61,177 c.cs of Cholera Vaccine were used for inoculation and 2,62,352 ampoules (of 2 c.c. each) of Bacteriophage were issued for prevention and treatment. During the year, 11 towns were reported to be infected as compared to 14 towns during 1944. Gauhati town recorded the highest number of deaths (24). In the rural areas Madhabpur circle of Sylhet district recorded the highest death-rate (2.79) followed by Maulvibazar and Barlekha rural circles (1.49 each).

From the tea estates a total of 62 deaths from Cholera was reported during 1945 as compared to 89 during 1944.

23 *Small-pox*.—The incidence of Small-pox showed an appreciable decline in the Province as a whole during 1945, though Sibsagar district recorded higher incidence as compared to the previous year. In all there were 3,838 deaths from Small-pox during 1945 as compared to 11,728 during 1944 and the quinquennial average of 3,092. The epidemic of 1944 was carried into the early part of this year. In the districts of Sylhet and Kamrup Small-pox prevailed in sporadic form throughout the year, though the incidence declined considerably during the latter half of the year.

The table below shows the death-rates per mille due to Small-pox by districts during 1945, 1944 and the previous quinquennium.

Districts						Death-rate per mille			Difference between the columns (2) and (4)
						1945	1944	1940-44	
1						2	3	4	5
Cachar	...	...	...	...	...	·10	·79	·23	—·13
Sylhet	...	...	...	...	...	·56	2·01	·55	+·01
Goalpara	...	...	...	...	...	·07	·45	·10	—·03
Kamrup	...	...	...	...	...	·45	·95	·24	+·21
Darrang	...	...	...	...	...	·08	·28	·08	...
Nowgong	...	...	...	...	...	·19	2·24	·61	—·42
Sibsagar	...	...	...	...	...	·71	·35	·08	+·63
Lakhimpur	...	...	...	...	...	·23	·64	·15	+·08
Total						·38	1·18	·31	+·07

Although the incidence of Small-pox was low as compared to the previous year, it was still higher than the quinquennial average and shows the need for continued mass vaccination especially amongst the rural masses where vaccination is not compulsory and people are very unwilling to be vaccinated during periods of freedom from the disease. During the year, 12 towns were reported to be infected as compared to 24 towns in the preceding year. Maulvibazar town recorded the highest number of deaths (14). Amongst the rural areas, Jaintiapur circle of Sylhet district recorded the highest death-rate (4.18).

24. *Plague*.—The Province continued to remain free from Plague during 1945.

25. *Fevers*.—The total number of deaths registered under the head 'Fevers' during 1945 was 87,992 as compared to 1,04,383 during 1944 and the quinquennial average of 95,545. Compared to last year there was a decrease of 16,391 in the number of deaths, probably as a result of the subsidence of the Malaria epidemic in parts of Sylhet district. 'Fevers' which include Malaria, *kala-azar* and other diseases with Fever as the predominant symptom accounted for 65.4 per cent. of the total mortality during 1945 as compared to 63.2 per cent. during 1944. Though deaths from 'Fevers' are mainly due to Malaria, it is not possible to determine the percentage of deaths due to Malaria alone.

The following table shows the death-rate per mille due to fevers by districts during 1945, 1944 and the previous quinquennium:—

Districts						Death-rate per mille			Difference between the columns (2) and (4)
						1945	1944	1940-44	
1						2	3	4	5
Cachar	...	...	...	...	...	10·60	13·77	10·82	—·22
Sylhet	...	...	...	...	...	10·11	14·11	11·23	—1·12
Goalpara	...	...	...	...	...	13·05	14·77	16·82	—3·77
Kamrup	...	...	...	...	...	5·23	5·12	6·07	—·76
Darrang	...	...	...	...	...	9·83	10·21	10·70	—·87
Nowgong	...	...	...	...	...	5·37	6·26	7·88	—2·51
Sibsagar	...	...	...	...	...	8·21	7·75	7·62	+·59
Lakhimpur	...	...	...	...	...	5·58	6·16	7·36	—1·78
Total						8·74	10·53	10·08	—1·34

The highest death-rate was recorded in the district of Goalpara and the lowest in Kamrup. Compared to last year only Sibsagar district returned a higher death-rate during 1945.

Amongst the towns high death-rates were reported from Goalpara and Barpeta and among rural circles, Jaintiapur circle of Sylhet district recorded the highest rate.

As in previous years, Quinine and other anti-malaria drugs were distributed free to indigent Malaria patients in the badly affected areas throughout the Province.

26. *Kala-Azar*.—The incidence of *kala-azar* showed a definite trend upwards during the year. Since the inception of the Public Health Department in Assam, the fight against *kala-azar* has been waged unceasingly, but during the war years both survey and treatment centres had to be curtailed due to lack of doctors and a great deal of work, on planned scientific lines, remains to be done to control the incidence of this disease in the Province. A factor of importance is the desperately low economic condition of the masses with resulting malnutrition and the very poor standard of rural housing. During the year, insecticidal spraying against the sandfly could not be carried out and the work was confined, as before, to early detection and treatment of cases. Even this becomes difficult due to lack of co-operation from the patients during the cultivating and harvesting periods.

The table below shows the number of *kala-azar* cases treated yearly from 1935 to 1945.

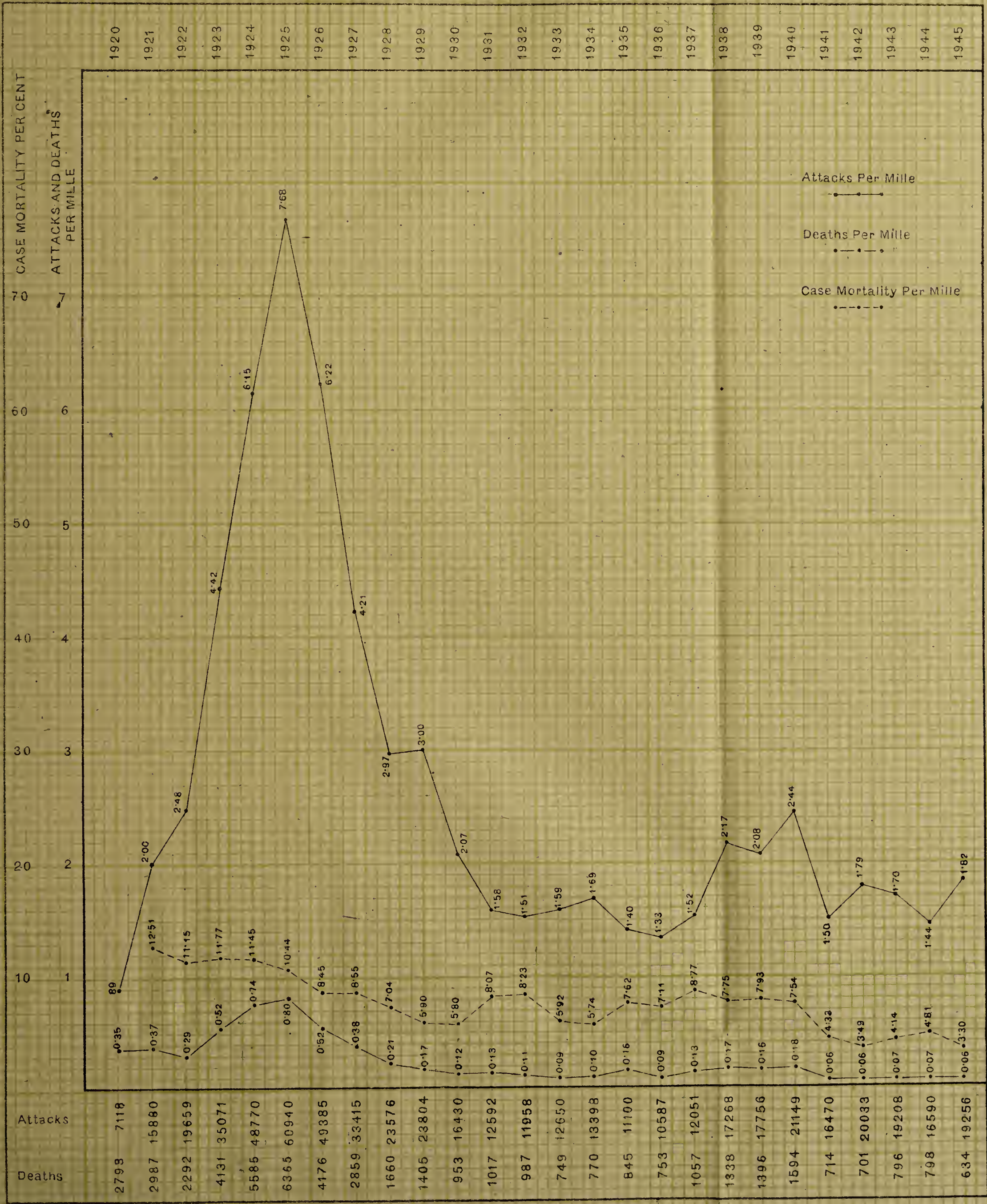
Districts	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
1	2	3	4	5	6	7	8	9	10	11	12
Cachar	478	574	445	716	669	778	1,024	963	935	805	1,135
Sylhet	3,869	3,645	3,672	4,622	4,029	3,386	2,830	3,887	3,624	3,566	4,561
Goalpara	1,245	1,275	2,046	2,541	2,989	3,194	2,761	3,314	2,639	2,178	2,125
Kamrup	1,465	1,309	918	1,189	1,138	1,721	1,215	1,338	1,505	914	1,573
Darrang	738	636	514	989	861	1,491	1,128	2,599	2,393	1,860	2,087
Nowgong	1,651	1,471	2,317	3,265	3,875	5,129	3,593	2,774	3,093	2,758	2,586
Sibsagar	938	864	1,396	3,050	3,315	4,070	2,640	3,643	3,494	2,747	2,629
Lakhimpur	12	6	2	13	15	15	12	15	50	40	76
Khasi and Jaintia Hills .. ..	..	..	..	..	..	..	..	..	..	..	..
Naga Hills	7	5	15	39	47	16	8	3	3	..	..
Lushai Hills .. ..	..	..	..	..	..	..	..	..	..	..	..
Garo Hills	690	793	717	824	808	1,346	1,259	1,496	1,472	1,722	2,484
Sadiya Frontier Tract .. ..	..	..	2	..	..	..	..	1	..	..	..
Manipur State	7	8	7	20	10	3	..	..	..	..	..
Total	11,100	10,587	12,051	17,268	17,756	21,149	16,470	20,033	19,208	16,590	19,256

The number of recorded deaths from *kala-azar* by districts from 1935 to 1945 is shown in the following table:—

Districts	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
1	2	3	4	5	6	7	8	9	10	11	12
Cachar	7	2	4	5	8	5	32	1	4	31	5
Sylhet	260	173	207	268	152	115	115	154	131	99	128
Goalpara	100	84	135	106	205	174	124	90	90	122	18
Kamrup	176	61	77	104	58	69	62	65	67	32	66
Darrang	91	155	256	256	181	221	100	89	195	117	150
Nowgong	52	121	196	101	170	161	135	119	152	102	80
Sibsagar	101	99	126	447	553	773	95	102	76	161	34
Lakhimpur .. ..	..	..	..	..	1	3	1	3	8	19	37
Khasi and Jaintia Hills .. ..	..	10	5	5	12	..	1	..	1	..	..
Naga Hills .. ..	..	..	..	..	9	3	..	..	1	2	..
Lushai Hills .. ..	..	..	..	..	..	..	..	..	..	..	..
Garo Hills	58	47	51	46	47	70	49	78	71	113	116
Sadiya Frontier Tract .. ..	..	1	..	..	..	..	..	..	..	..	..
Manipur State .. ..	..	..	..	..	..	..	..	..	..	..	..
Total	845	753	1,057	1,338	1,396	1,594	714	701	796	798	634

CHART V

KALA-AZAR IN ASSAM 1920-1945



For the treatment of *kala-azar* cases two new Public Health Department Dispensaries in Nowgong district were sanctioned by the Government during 1945. Drugs are supplied to all dispensaries in the Province for the treatment of *kala-azar* cases and in all Civil Hospitals provision is made for the treatment of indoor patients. There are also *kala-azar* Hospitals at Golaghat and Tura.

27. *Influenza*.—Eight hundred and twenty-one deaths due to Influenza were reported during the year as compared to 352 deaths during 1944. Sylhet district recorded the highest number of deaths (179) followed by Darrang (148), Sibsagar (129), Kamrup (120), Garo Hills (106), Lakhimpur (67), Khasi and Jaintia Hills (32), Goalpara (25) and Nowgong (15). Outbreaks of Influenza were reported from Khasi and Jaintia Hills and Lushai Hills but it is doubtful if these were really outbreaks of epidemic Influenza.

28. *Enteric Fevers*.—Enteric group of fevers accounted for 36 deaths during the year as compared to 67 deaths during 1944. Enteric fever is notifiable only in the Municipal areas, and a large number of cases undoubtedly remain undiagnosed. The higher number of deaths due to Enteric fevers was recorded in Sylhet town (13) followed by Tezpur town (9), Dibrugarh and Silchar (4 each), and Gauhati and Habiganj towns (2 each). Cases of enteric group were reported from Gauhati almost throughout the year and it is only surprising that more deaths were not recorded considering its appalling sanitary standard and defective water supply system.

29. *Dysentery and Diarrhoea*.—A total of 8,856 deaths from Dysentery and Diarrhoea was reported during 1945 as compared to 11,100 in the preceding year and the quinquennial average of 9,934. The following table shows the death-rates from Dysentery and Diarrhoea by districts for the years 1945, 1944 and the previous quinquennium.

Districts	Death-rate per mille			Difference between the columns (2) and (4)
	1945	1944	1940-44	
1	2	3	4	5
Cachar	1.78	2.41	1.87	—0.09
Sylhet	1.07	1.33	1.13	—0.06
Goalpara	.05	.10	.55	—0.50
Kamrup	.27	.41	.38	—0.11
Darrang	.94	1.73	1.70	—0.76
Nowgong	.69	.47	.61	+0.08
Sibsagar	1.39	1.20	1.33	+0.06
Lakhimpur	.95	1.61	1.46	—0.51
Total	.88	1.12	1.04	—0.16

The seasonal prevalence was rather unusual as higher number of deaths were reported during the cold months.

30. *Respiratory Diseases*.—There were 3,561 deaths due to this group of diseases during 1945 as compared to 4,520 deaths during 1944 and the quinquennial average of 4,690. The mortality rate per mille of population was .35 during 1945, as compared to .46 during 1944. Lakhimpur and Cachar districts recorded the highest death-rate (.84) followed by Sibsagar district (.57) and Darrang district (.48).

31. *Injuries and other causes*.—During the year, 1,221 deaths were reported from all Injuries as compared to 1,655 during 1944. This includes 195 deaths (113 males and 82 females) due to suicide, 894 from wounds and accidents, 30 from Snake-bite, 83 due to Injuries received from wild animals and 19 due to rabies.

Deaths reported under 'other causes' numbered 26,018 during 1945 as compared to 29,775 during 1944.

32. *Yaws*.—During the year, 853 cases of Yaws were treated at the Public Health Department and Local Board Dispensaries as compared to 597 cases treated during 1944, and 1,368 cases during 1943. Yaws is mostly prevalent amongst aboriginal and hills tribals and the largest number of cases were treated in the districts of Goalpara (316) and Garo Hills (305).

33. *Minor Eye Complaints*.—The number of cases of Minor Eye Complaints treated at the Public Health Department Dispensaries was 3,067 during 1945 as compared to 3,148 during 1944 and 2,868 during 1943. No work in connection with survey and welfare of the blind has yet been started in this Province. A proposal for the formation of a Provincial Council for Blindness with an adviser in blind welfare is now under the consideration of Government.

34. *Leprosy*.—Leprosy is indigenous in the Province specially amongst the aboriginals and the hills tribals. A total of 795 Leprosy cases (113 Lepromatous and 682 Neural) was treated at the Dispensaries and Clinics of the Public Health Department during 1945 as compared to 786 during 1944. In addition 1,898 cases were treated at the various centres of treatment under the Medical Department, Local Boards and Missionary Societies.

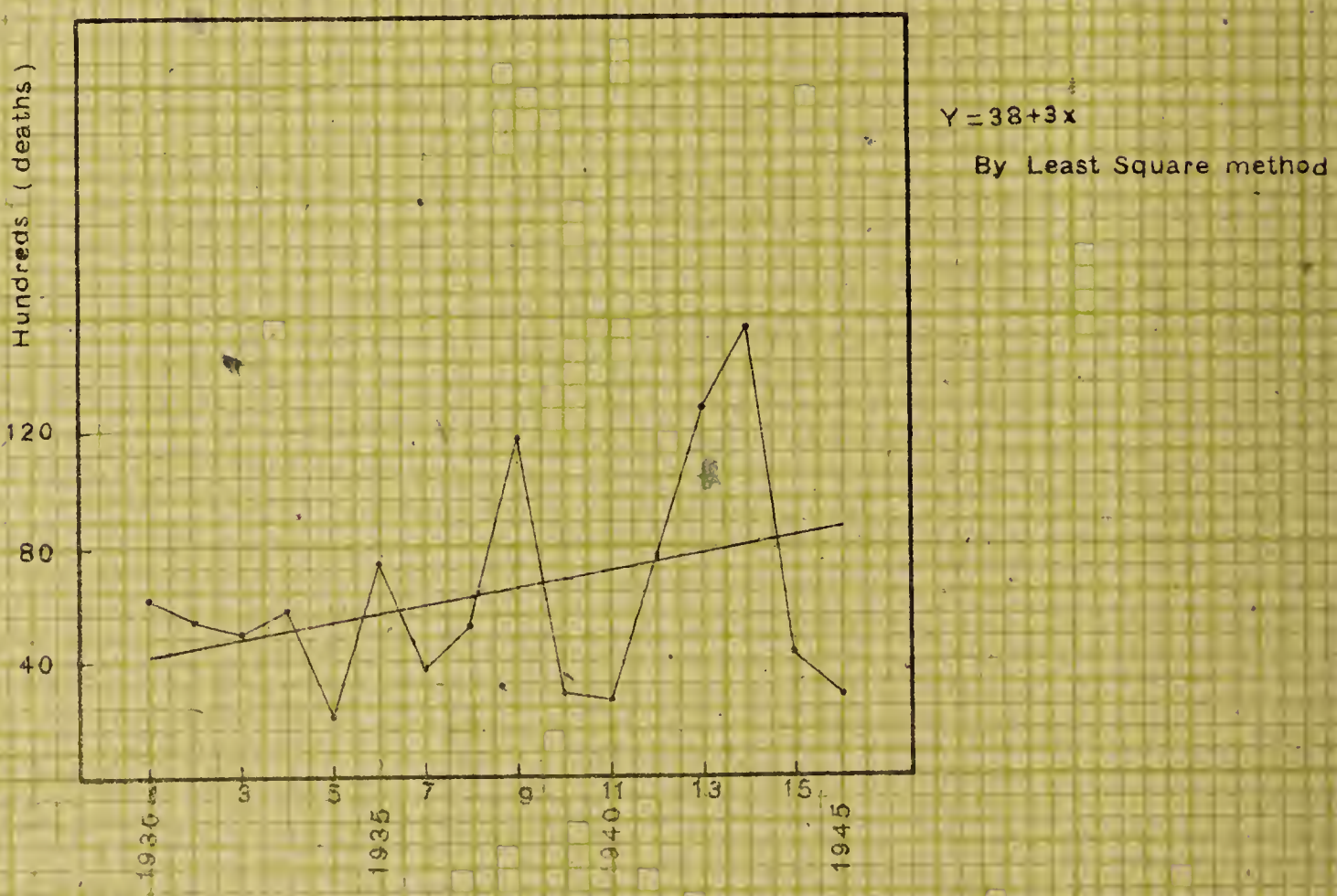
The Special Leprosy Officer carried out an intensive Leprosy survey in Singimari area in Nowgong district amongst a population of 1,510 Mikirs and Santals and detected 250 cases of Leprosy (16 Lepromatous and 234 Neural), giving 15.5 per cent. case incidence. He also carried out a survey in the Trans-Dikhu area of Naga Hills amongst 5,394 Koynak Nagas and detected 43 cases (14 Lepromatous and 29 Neural), showing 8 per cent. case incidence. As a result of these surveys, proposals for Colonies near Singimari village and at a suitable site in the Naga Hills have been submitted to Government for consideration. Routine propaganda work for limiting the spread of the disease is carried out by the Special Leprosy Officer and other doctors of the Department in addition to surveys. The Special Leprosy Officer and another licentiate of the Public Health Department were sent to a refresher course in Leprosy at the Calcutta School of Tropical Medicine during 1945. Short courses of instruction were conducted for Leprosy workers at the Government Leper Asylum, Sylhet. Missionary Leper Colonies continued to do excellent work during the year.

CHAPTER IV

Epidemiology

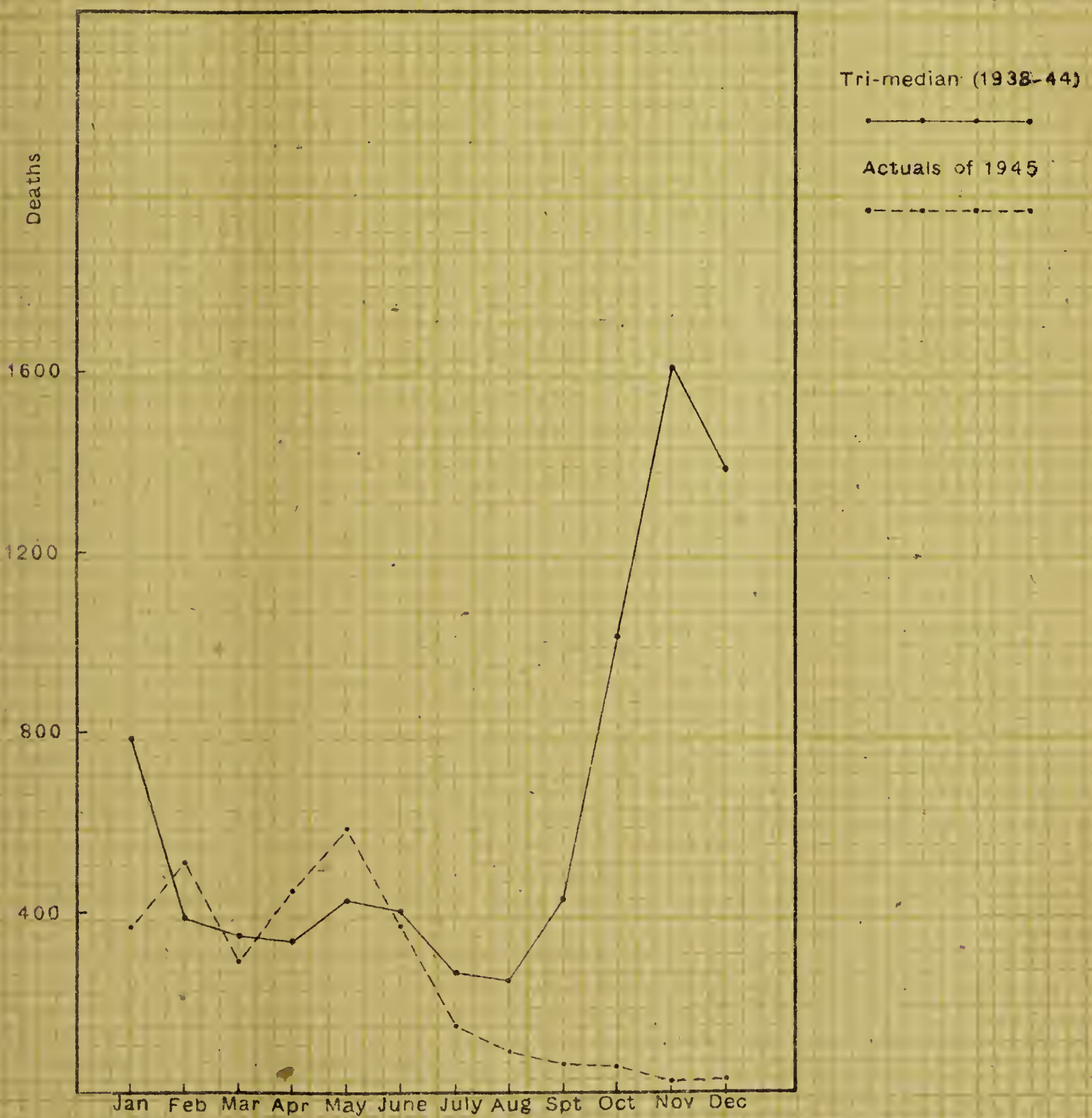
35. *Cholera*.—An analysis of the Cholera mortality figures for the years 1930 to 1944 shows an upward trend in the incidence of Cholera as indicated in the graph below:—

TREND OF CHOLERA MORTALITY IN THE LAST 15 YEARS
(1930-44) IN ASSAM



There does not appear to be any definite periodicity in the intensity of its prevalence. The difference in the incidence of Cholera between urban and rural areas is not significant. The urban and rural death rates due to Cholera were .24 and .30 respectively during the year as compared to .42 and .38 during 1944. The following graph shows the average seasonal incidence of Cholera from 1938 to 1944 and the actual seasonal incidence during 1945:

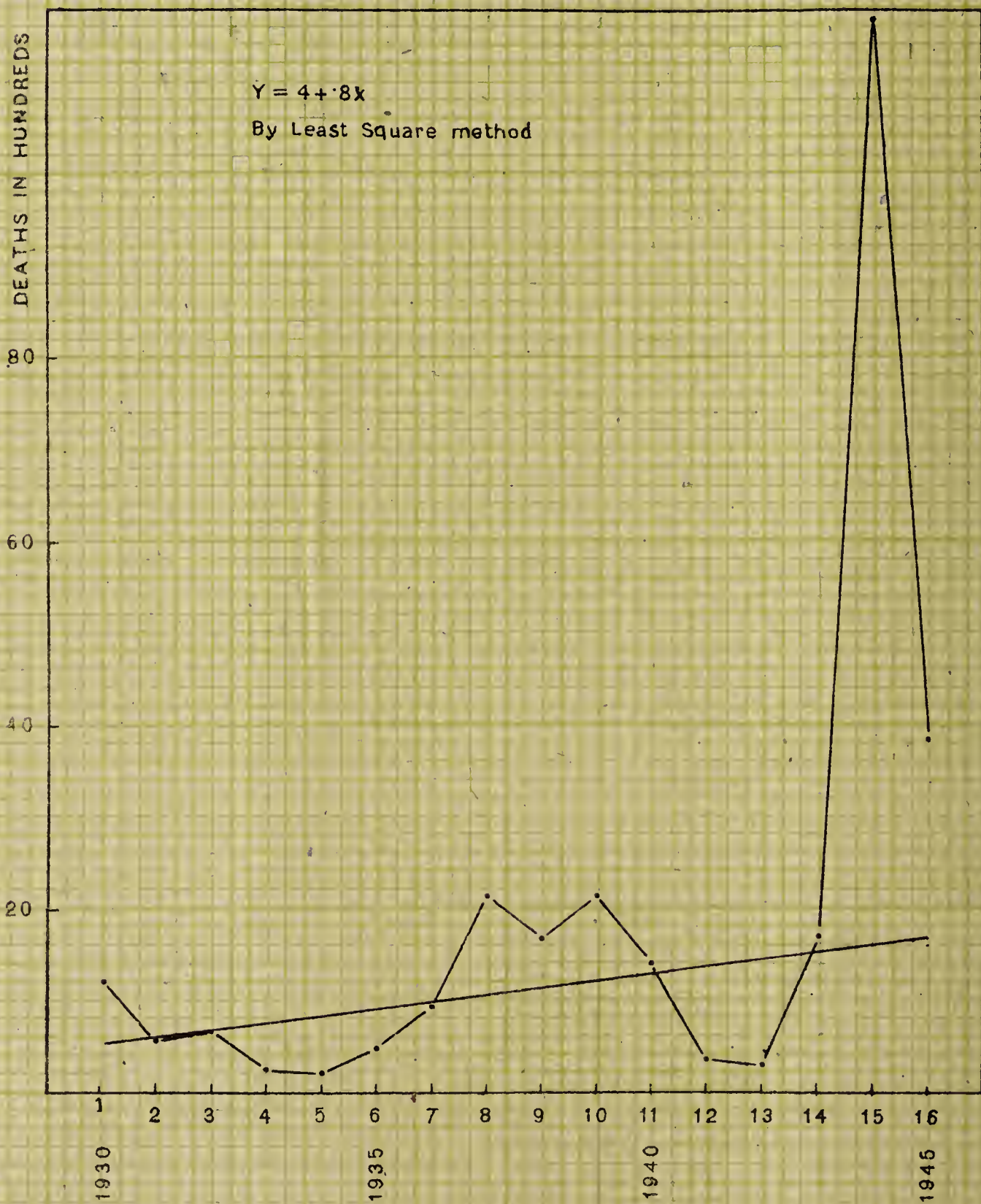
DEATHS FROM CHOLERA IN ASSAM DURING 1945
AND THE TRI-MEDIAN OF THE SAME DURING 1938-1944



During the year, total deaths due to Cholera were 3,030 as compared to 4,107 during 1944 and 15,454 during 1943. As in previous years, Sylhet district recorded the highest number of deaths from Cholera 2,006 cases, or 66 per cent. of the total Cholera mortality with a death-rate of .61 per mille. Cholera did not occur in epidemic form in any part of the Province throughout the year.

36. *Small-pox*.—An analysis of Small-pox mortality figures for the years 1930-1943 shows a slight upward trend in the incidence of Small-pox, as indicated in the graph below :—

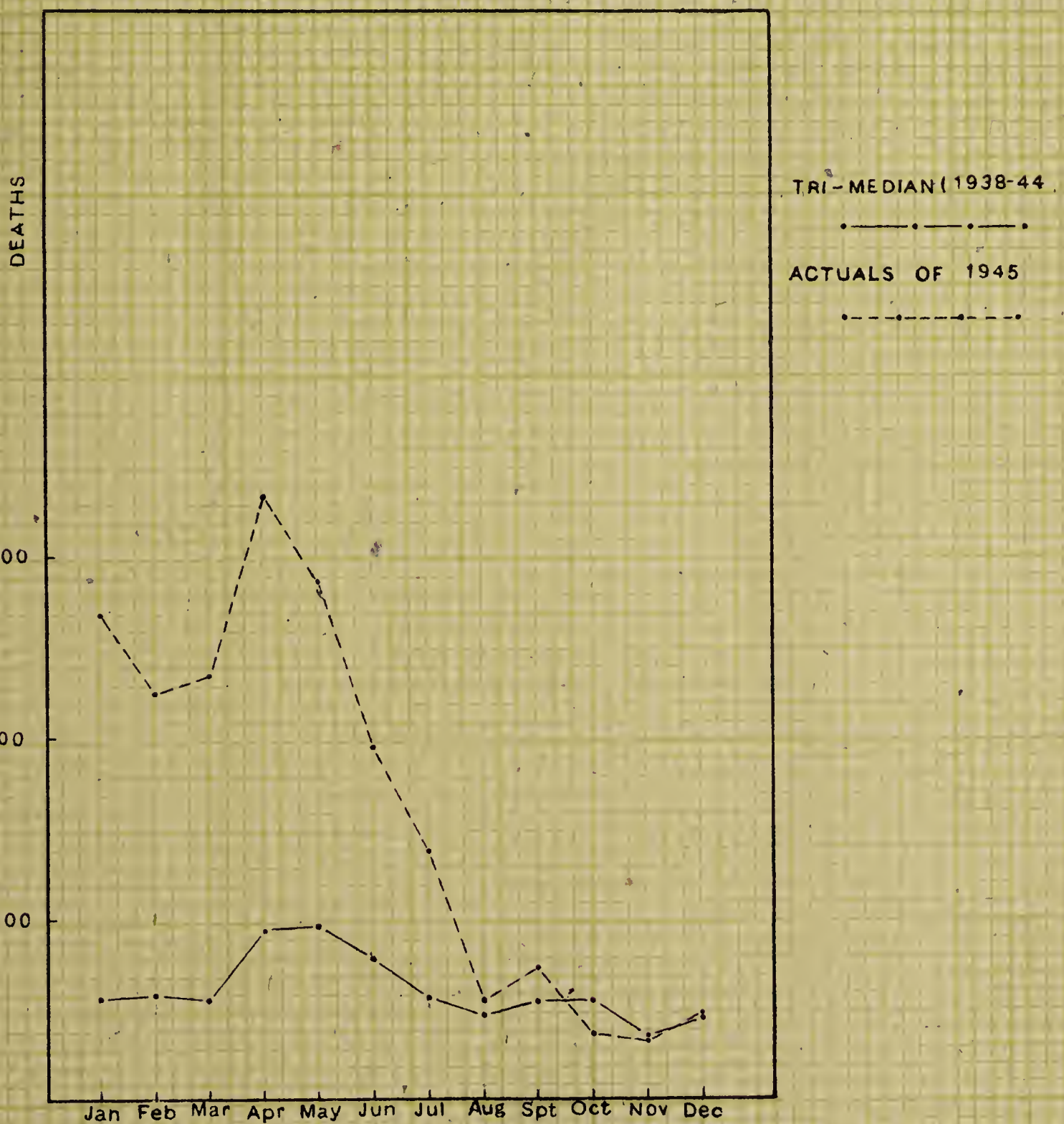
TREND OF SMALL-POX MORTALITY IN THE LAST 14 YEARS
(1930-43) IN ASSAM



The epidemic of 1944 was carried into the early part of the year and subsided gradually. There were 3,838 deaths from Small-pox during the year as compared to 11,728 during 1944 and 1,692 during 1943. Epidemiologically it was not a satisfactory year. Sibsagar district recorded an unusually high incidence of Small-pox, with a death-rate of .71 per mille. The urban and rural death-rates due to Small-pox were .25 and .38 respectively during 1945 as compared to 1.43 and 1.18 during 1944.

A graph showing the average seasonal incidence of Small-pox and the actual seasonal incidence during 1945 is given below:—

DEATHS FROM SMALL-POX IN ASSAM DURING 1945
AND THE TRI-MEDIAN OF THE SAME DURING 1938-44



March to June is the period of highest incidence.

CHAPTER V

Fairs and Festival

37. A large number of fairs and festivals are observed annually in different parts of the Province where water-supply and sanitary arrangements are supervised by the Public Health Staff. Vaccination against Small-pox and Anti Cholera inoculation are also carried out. The number of major fairs or hindu festivals held during 1945 was 18.

Most of the big festivals are observed during the spring and early summer months—a period during which there is everpresent danger of spread of Cholera in epidemic form. In spite of the limited facilities and staff available no epidemic occurred in connection with any festival during the year. The more important festivals held during 1945, were—Ambubasi Mela on Kamakhya Hills, Darranga Mela in Kamrup district, Mohamaya Mela at Bagoribari in Goalpara district, Shibratri Mela on Bhuban Hills, Sidheswari Baruni Mela in Cachar district, and Dhaka Dhakhin Thakurbari Mela in Sylhet district. Large amounts are spent every year for temporary sanitary arrangements at these gatherings and it is proposed to provide protected water-supply and efficient conservancy system on a semi-permanent basis at the sites where the bigger annual gatherings are held.

Notifications were published in the *Assam Gazette* and in the local press stressing the advisability of taking Anti-Cholera inoculation and Anti-Small-pox vaccination by the intending pilgrims to festivals—both within and outside the Province. Certificates of Anti-Cholera inoculation were issued to those proceeding to major gatherings in other Province.

CHAPTER VI

Urban sanitation and water supply

38. There are 18 Municipalities and 10 town committees in the Province. Urban Health Officers were provided by the Public Health Department for ten Municipal towns during 1945. The Shillong Municipality employs a fully qualified Medical Officer of Health. The Municipalities also employ Sanitary and Conservancy Inspectors, Vaccinators and other staff for sanitary and health services. The total income of all the Town Committees and Municipalities during 1945 was Rs.16,79,763 as compared to Rs.15,46,254 during the preceding year. A sum of Rs.10,27,553 or 66 per cent. of the total income was spent on sanitary and health services during 1945 as compared to Rs.9,37,035 or 60 per cent. during 1944.

Periodical inspections of Municipal Towns are made by the Assistant Directors of Public Health and recommendations for improvement made. But, it is noted with regret that sanitary conditions in almost all the towns of the Province remained very unsatisfactory during the year—partly due to indifference on the part of Municipal authorities and partly due to non-availability of materials and staff or lack of funds. Populations of towns have increased, but there is no planned expansion and development.

39. Only ten towns in the Province (6 in the plains districts and 4 in Hills districts) have piped water-supply systems. In the bigger towns, where the supply of water is inadequate and the plants old and defective, no improvement was carried out during the year. No Municipality is in a financial position to install new water supply plants and it is to be hoped that the Provincial Government would help them by making percentage grants or permitting loans for the purpose. Some of the bigger towns, especially Gauhati, Jorhat, Sylhet and Tezpur require immediate improvements and extensions in their plants to increase the quantity of water and ensure constant safe supply. Some of the district towns, e.g., Dibrugarh and Nowgong are still without a piped water supply system and in spite of repeated exhortations enough attention is not given to this important problem by the civic authorities.

CHAPTER VII

Rural Sanitation

40. According to the 1941 census 97 per cent. of the people of the Province live in rural areas, but the sanitary conditions of the villages continue to be as primitive as ever. The Local Boards are responsible for furthering the cause of rural sanitation, but these bodies always suffer from lack of funds and hardly any improvement is made from year to year. The Public Health Department staff carries out health measures in rural areas by mass inoculation against Cholera in infected areas and by mass vaccination against Small-pox throughout the Province apart from general sanitary supervision and disinfection of sources of water-supply and health propaganda among the rural masses. The Dispensaries of the Department, all located in rural areas, treat patients of *Kala-azar*, Malaria, Yaws, Leprosy, Dysentery and Diarrhoea, etc. Anti-Malaria Drugs are also distributed through village Post Offices.

During 1945, out of a total income of Rs.37,91,082 only Rs.2,62,437 or 7 per cent. was spent on rural sanitation by the Local Boards in the Province.

No appreciable improvement was made during the year in the sources of water-supply in rural areas.

CHAPTER VIII

Malaria

41. Malaria is responsible for a very large percentage of morbidity and mortality in the Province. During the year, the total number of Malaria cases treated at both Public Health and Medical Department Dispensaries, was 9,51,730 as compared to 8,69,993 during 1944. This number is probably a small fraction of the total population who suffer from Malaria every year and to whom no medical aid is available. As mentioned before 65.4 per cent. of the total mortality during 1945 was due to "Fevers" mainly Malaria.

Anti-Mosquito measures were carried out by the Department in 27 selected localities, apart from the Anti-Malaria measures carried out by the railway authorities in 88 railway station areas.

The Anti-Adult spraying with Pyrethrum started at Baniyachong during 1944 was continued throughout the year. The fifty bedded emergency hospital at Baniyachong also continued to function, as also the Malaria treatment centres. Conditions returned to normal by the end of the year.

	Public Health Department						Medical Department						Jail Department					
	Quinine			Cinchona			Quinine			Cinchona			Quinine			Cinchona		
Districts	Free	On payment	Lbs. oz. dr. gr.	Free	On payment	Lbs. oz. dr. gr.	Free	On payment	Lbs. oz. dr. gr.	Free	On payment	Lbs. oz. dr. gr.	Free	On payment	Lbs. oz. dr. gr.	Free	On payment	Lbs. oz. dr. gr.
Cachar	..	12 0 0	0 0 0	7 12 0	0 0 0	0 0 0	2 0 0	0 0 0	0 0 0	0 0 0	0 0 0	1 8 0	0 0 0	0 0 0	0 12 0	0 0 0	0 0 0	0 0 0
Sylhet360 9 2	0 0 0	119 5 4	0 0 0	2 0 0	24 0 0	0 0 0	0 0 0	0 0 0	0 0 0	11 7 4	0 0 0	0 0 0	3 0 0	0 0 0	0 0 0	0 0 0
Goalpara 47 3 7	0 0 0	28 7 5	0 0 0	0 0 0	128 1 2	0 0 0	0 0 0	0 0 0	0 0 0	164 5 2	0 0 0	0 0 0	6 0 0	0 0 0	0 0 0	0 0 0
Kamrup 40 9 3	0 0 0	35 0 5	0 0 0	0 0 0	21 4 0	0 0 0	0 0 0	0 0 0	0 0 0	16 10 0	0 0 0	0 0 0	11 8 0	0 0 0	0 0 0	0 0 0
Darrang 21 5 0	0 0 0	9 13 0	0 0 0	0 0 0	5 7 0	0 0 0	0 0 0	0 0 0	0 0 0	2 2 0	0 0 0	0 0 0	5 0 0	0 0 0	0 0 0	0 0 0
Nowgong 52 6 6	0 0 0	24 12 5	0 0 0	0 11 4	87 6 2	0 0 0	0 0 0	0 0 0	0 0 0	72 8 0	0 0 0	0 0 0	2 8 0	0 0 0	0 0 0	0 0 0
Sibsagar 36 13 0	0 0 0	31 8 5	0 0 0	0 0 0	48 9 6	0 0 0	0 0 0	0 0 0	0 0 0	45 10 0	0 0 0	0 0 0	4 5 0	0 0 0	0 0 0	0 0 0
Lakhimpur 3 15 2	0 0 0	0 0 0	0 0 0	0 0 0	18 2 0	0 0 0	0 0 0	0 0 0	0 0 0	9 4 0	0 0 0	0 0 0	5 0 0	0 0 0	0 0 0	0 0 0
Khasi and Jaintia Hills 0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	63 10 3	0 0 0	0 0 0	0 0 0	0 0 0	30 4 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Naga Hills 0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	47 13 0	0 0 0	0 0 0	0 0 0	0 0 0	17 8 4	0 0 0	0 0 0	1 2 0	0 0 0	0 0 0	0 0 0
Lushai Hills 0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	39 12 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Garohills 5 3 4	0 0 0	4 2 0	0 0 0	0 0 0	32 9 0	0 0 0	0 0 0	0 0 0	0 0 0	11 1 0	0 0 0	0 0 0	0 8 0	0 0 0	0 0 0	0 0 0
Sadiya Frontier Tract 0 0 0	3 0 0	0 0 0	0 0 0	0 0 0	23 3 0	0 0 0	0 0 0	0 0 0	0 0 0	8 4 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0
Total..580 2 0 40	119 11 0	239 14 0	2 11 4	0 541 13 5	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	390 8 2 0	42 1 0 0	0 0 0	32 8 0 0	0 0 0	0 0 0	0 0 0

[illegible]

The Assam Medical Research Society was dissolved and a Malaria Section under the Public Health Department was started on the 1st August 1945, with a Malariologist-in-charge. Damage to the Shari bridge on the Sylhet Road during the monsoon period necessitated the maintenance of a ferry system and the billeting of a large number of labourers and technical staff in this notoriously malarious area. A rapid Malaria Survey was carried out and necessary control measures instituted. During the year, spraying with D. D. T. was introduced at Nongpoh. No training class for Malaria Inspectors was held during the year. As usual, identification of larvae and adults was carried out and 212 mosquitoes dissected during the year—with no positive finding.

42. *Sale of quinine.*—The sale of quinine and its substitutes continued to remain under Government control. Distribution of the drugs was centralised at the Public Health Laboratory, Shillong under the supervision of the Director of Public Health. During the year 3,455 parcels of Anti-Malaria drugs, of the total cost of about Rs. 9,41,542 were distributed from the Public Health Laboratory. Distribution of Mepacrine through Post Offices in the rural areas was started from the 1st June 1945, and by the end of the year 2,939 boxes of Mepacrine tablets, each containing 20 treatment packets of 15 tablets were issued to different Post Offices for sale in the rural areas. In addition, the Public Health Laboratory issued during the year 2,27,82,368 tablets of Quinine substitutes and 33,211 boxes of Quininc Ampoules throughout the Province.

The following table shows the distribution of Quinine and Cinchona Febrifuge by the Public Health Department to the different consumers throughout the Province.

Name of Consumer						Quinine sulphate	Cinchona Febrifuge
Political Secretary, Commerce Group, for the use of Member Gardens.						3,480 lbs.	Nil.
Non-Member Gardens						322 lbs.	3 lbs.
Agents for sale to the Public						679 lbs. 10 oz.	2 lbs.
Private Dispensaries						55 lbs. 14 oz.	7 lbs.
Employers of Labour other than Tea Industry						207 lbs. 8 oz.	Nil.
Government Departments and Local Bodies						1,920 lbs. 7 oz. 3 dr.	1,564 lbs. 6 oz.
Total						6,665 lbs. 7 oz. 3 dr.	1,576 lbs. 6 oz.

A statement showing the quantities of Quinine and secondary Alkaloids of Cinchona distributed free or at reduced rate by the Public Health, Medical, and other Departments during 1945 is appended.

CHAPTER IX

Maternity and Child Welfare

43. During the year, 22,008 infants died giving an infant mortality-rate of 130·51 per thousand of live births. Maternal mortality-rate during the year was 17·02 per 1,000 births (including still births) as compared to 18·22 during 1944. In the rural areas, the maternal mortality-rate was 17·12 and in urban areas 14·20.

Maternity and Child Welfare work in the Province is still almost entirely under the aegis of the Red Cross Society which has branches in all districts. Most of the centres were short of staff and could not maintain a high standard of efficiency. The Maternity and Child Welfare centres at Shillong, Silchar, Tezpur, Jorhat and Sylhet did commendable work during the year.

Training of Midwives, was started, during the year, at the Ganesh Das Hospital for Women, Shillong. Training of Dais was carried on, as in previous years, at the various Hospitals and Welfare Centres. One student was sent to Sir John Anderson Health School, Calcutta, for training as Health Visitor, and 4 to the Dufferin Hospital, Calcutta, for Midwifery training. One student passed the Health Visitor's course during 1945.

During the year, 10 Welfare Centres functioned—all in urban areas. The local bodies employ a certain number of trained Dais for work in the rural areas.

The Post-War Reconstruction Scheme for organising Maternity and Child Welfare work in the Province under the Public Health Department is under the consideration of Government.

CHAPTER X

School Hygiene and Medical Inspection of School Children

44. There is no cadre of School Health Officers in the Province and the Post-War Reconstruction Scheme for the provision of a School Health service is still under consideration. Schools were visited and children inspected as far as possible by the Public Health Department staff during the course of their routine work. Short talks on health and hygiene were also given to the students and the staff. Routine Medical inspection of selected schools was carried out and suggestions made for the improvement of general sanitation, better Physical training and the teaching of Hygiene.

CHAPTER—XI

Health Propaganda

45. Health propaganda was carried out mainly in the rural areas by the Public Health Department staff with the aid of Magic Lantern demonstrations and health stalls and exhibitions at fairs and festivals and other public gatherings. Leaflets, Posters and Pamphlets were distributed and short talks given at meetings organised by the village health and sanitation committees, which now exist in many areas of the Province. The Scheme for centralising all publicity and propaganda under the Publicity Department did not come to fruition during the year, but the existing Publicity and Rural Development Department carried out a certain amount of health propaganda under our guidance and rendered valuable help in organising mass Vaccination campaign throughout the Province.

46. *Provincial Tuberculosis Association.*—Further progress was recorded in the activities of the Provincial Tuberculosis Association as a result of increased interest and generosity of the public. This was reflected in the increased amount of donations during the year amounting to Rs. 14,261 as compared to Rs. 11,461 during 1944. In addition to this amount, the Shillong Gymkhana Race Committee donated Rs. 18,704-8-0 for the Reid Chest Hospital and a model Dairy was built and extension made to the Nurses' quarters. The accommodation at the Chest Hospital was increased from 47 to 56 beds during the year. The total number of admissions to the Chest Hospital during the year was 45 and discharges 32 as compared to 37 and 20 respectively of the previous year; a total of 1,832 patients (1,469 at Shillong, and 363 at Dibrugarh) attended Clinics as compared to 952 during 1944.

An Assistant Superintendent, a Resident Medical Officer and an Honorary Physician were appointed for the Chest Hospital. Sanction was also accorded for the appointment of a Matron and 4 Nurses. It is hoped to start regular courses of training in Tuberculosis for the Doctors of the Province, both Government servants and private practitioners. Three suitable girls were sent to Delhi for undergoing the Health Visitors' course.

Provincialisation of the Reid Provincial Chest Hospital is still under consideration. Anti-Tuberculosis propaganda work was carried on as usual. A copy of the film "How Tuberculosis spreads" was purchased by the Association and shown in various Cinema Houses in the Province.

Special mention must be made of the enthusiasm shown by Mr. M. Khurshid, I.C.S., Deputy Commissioner, Sylhet, who has raised a large sum for the construction of an up-to-date Tuberculosis Hospital and Clinic at Sylhet.

CHAPTER—XII

Public Health Administration

47. The notable event of the year was the creation of a Malaria Section of the Public Health Department to serve as a nucleus and headquarters for the Anti-Malaria organisation. No further advance has been made towards strengthening and increasing public health services in the Province. Acute shortage of Doctors continued during the year. The sub-charge of the Government Vaccine Depôt, Shillong, was deputed during 1945 for training in the technique of manufacture of vaccine lymph at the King Institute, Guindy, Madras. Two licentiate Doctors were sent for a refresher course in Leprosy held at the Calcutta School of Tropical Medicine. An experienced Chemist, with a Master's degree in Chemistry and specially trained in food and water analytical and bacteriological work was appointed Public Analyst and Officer in charge, Provincial Public Health Laboratory.

48. The budget allotments for the year 1944-45 and 1945-46 amounted to Rs. 14,49,100 and Rs. 17,55,400 respectively. The increased allotment for 1945-46 was mainly due to an increase under epidemic diseases (Malaria).

The strength of the technical personnel of the Public Health Department during the year was as follows :—

Director of Public Health	...	...	...	...	...	...	...	...
Assistant Directors of Public Health	...	...	...	...	...	...	...	3
District Medical Officers of Health	...	...	...	...	...	...	...	8
Malariologist In-charge, Malaria Section	...	...	...	...	...	...	...	1
Subdivisional Medical Officers of Health (Licentiates)	...	...	...	...	...	...	...	11
Urban Health Officers (Licentiates)	...	...	...	...	...	...	...	10
Licentiate Doctors on Epidemic, Malaria and General Public Health duty (including Public Health Dispensaries and Kala-Azar Hospitals).	...	...	...	...	...	...	...	102
Special Leprosy Officer (Licentiate)	...	...	...	...	...	...	...	1
Public Analyst	...	...	...	...	...	...	...	1
Statistician	...	...	...	...	...	...	...	1
Entomologist	...	...	...	...	...	...	...	1
Rural Health Inspectors	...	...	...	...	...	...	...	81
Assistant Rural Health Inspectors	...	...	...	...	...	...	...	14

The Shillong Municipal Board employs a qualified Health Officer (M.B., D.P.H.) whose salary is met partly by a contribution from Government.

CHAPTER—XIII

Vaccination

49. This Chapter and all the Statistical tables connected with it refer to the calender year 1945.

Mass vaccination was carried on throughout the Province during the winter months. Routine vaccination is suspended during the hot and rainy months except in affected areas. The lymph used for vaccination is prepared and supplied by the Government Vaccine Depôt, Shillong, and the instrument used is the rotary lancet.

50. *Staff.*—The total number of Vaccinators employed in the Province during the year was 546, *viz.*, 482 Local Board, 27 Municipal Board, 2 Development Board and 35 Government Vaccinators. The number of Vaccinators employed by the Manipur State is not known. Among the labour population employed by the Tea Industry, Railways, etc., and in Jails and Asylums vaccination was performed by their respective Medical staff. Doctors in charge Rural Dispensaries and on epidemic duty and the Rural Health Inspectors of the Department also performed vaccination in addition to checking the work of the Vaccinators.

51. *Vaccination, General.*—The total number of vaccination operations recorded as performed during the year by all agencies in the Province was 1,395,041; of these 4,30,734 were primary and 9,64,307 revaccinations. Compared to the preceding year, there was a fall in the number of vaccination by 5,12,830, due to the decreased prevalence of Small-pox during this year.

The total number of vaccination operations performed by all agencies during the year 1945 and the previous year is classified below:—

A. Primary Vaccination.

								1945	1944
(1) Successful.									
(a) Age 0	...	1 year	...	...	...	...	...	82,550	86,798
(b) 1	...	5 years	...	...	...	...	...	231,620	289,806
(c) 5	...	10 years	...	...	...	...	...	58,200	80,251
Total of successful primamary vaccination								386,968	467,525
Total of primary vaccination								430,734	532,098

B. Re-vaccination.

Successful	...	...	...	...	...	...	...	642,788	789,530
Total of re-vaccination								964,307	1,375,773
GRAND TOTAL								1,395,041	1,907,871

Out of a total of 1,68,632 live births during the year 1,46,624 infants survived the 1st year of life, but of these only 82,550 or 56 per cent. were successfully vaccinated. Large number of infants remain unprotected every year and this probably applies to all age groups.

52. *Vaccination work by districts.*—The table below shows increase or decrease in vaccination operation performed in different districts as compared to the preceding year.

						1945	1944	+ Increase. —Decrease.
Cachar	...	...	...	...	...	112,404	126,384	—13,980
Sylhet	...	...	...	...	...	366,525	650,980	—284,455
Goalpara	...	...	...	...	...	129,224	138,356	—9,132
Kamrup	...	...	...	...	...	126,829	174,248	—47,419
Darrang	...	...	...	...	...	117,865	162,447	—44,582
Nowgong	...	...	...	...	...	110,521	226,855	—116,334
Sibsagar	...	...	...	...	...	113,426	145,583	—32,157
Lakhimpur	...	...	...	...	...	152,301	96,396	+55,905
Khasi and Jaintia Hills	...	...	...	...	...	55,454	76,142	—20,688
Naga Hills	...	...	...	...	...	21,984	26,387	—4,403
Lushai Hills	...	...	...	...	...	19,466	17,674	+1,792
Garro Hills	...	...	...	...	...	15,145	15,717	—572
Manipur State	...	...	...	...	...	32,839	43,385	—11,046
Sadiya Frontier Tract	...	...	...	...	...	21,058	6,817	+14,241
Balipara Frontier Tract	...	...	...	...	...	—	Figures not available.	
Total						1,395,041	1,907,871	—512,830

53. *Vaccination in rural areas.*—Though vaccination is not compulsory in the rural areas, every facility and encouragement is given to the people to get themselves vaccinated. During 1945, 1,217,949 vaccinations were performed in the rural areas as compared to 1,702,193 during the previous year. Some opposition to vaccination is still met with during non-epidemic periods and to overcome this and give effect to mass vaccination, regulations under the Epidemic Diseases Act, 1897 are brought into force in the affected areas. During the year, Darrang and Lakhimpur districts, Sunamganj Subdivision, and some areas of Goalpara district were declared as Small-pox infected areas.

54. *Vaccination in Municipal Towns.*—In towns, where primary vaccination is compulsory out of 5,659 infants who survived 2,365 or 41.79 per cent. were successfully vaccinated as compared to 44.42 per cent. during 1944. The Municipal authorities do not give adequate attention to this important health measure and the Municipal vaccination work remains much below standard and the vaccinators perhaps the most ill paid employees of the Municipal Boards. The following towns recorded exceptionally low percentage of successful infantile vaccination.

Hailakandi (6.25), Nazira (15.51), Srimangal (17.94), Habiganj (20.00), Sunamganj (23.16), Jorhat (26.21), Golaghat (26.54), Barpeta (31.27), North-Lakhimpur (31.70), Shillong (35.33), Mangaldai (36.11), Sylhet (36.56), Tezpur (36.98) and Sibsagar (43.47).

The following towns recorded high percentage of successful vaccination.

Gauripur (77.5), Doom Dooma (77.5) Nalbari (72.72), Nowgong (70.1), Dhubri (69.52), Silchar (56.87), Tinsukia (55.66), Karimganj (54.12) and Goalpara (50.41).

55. *Percentage of successful vaccination and inspection of vaccination.*—The percentage of successful vaccination performed by all agencies during the year was 94.70 for primary vaccination and 64.04 for re-vaccination as compared to 92.57 and 67.35 respectively in the preceding year.

The routine inspection of vaccination is carried out by the Rural Health Inspectors. The Assistant Directors of Public Health, District Medical Officers of Health and Subdivisional Medical Officers of Health also carry out inspection of vaccination in the rural areas during their tours.

56. *Deaths from Small-pox.*—The total number of deaths in the Province due to Small-pox during the year was 3,888 (3,838 in plains districts and 50 in Hill districts) as compared to 12,091 (11,728 in plains districts and 363 in Hill district) during the previous year. The ratio of deaths from Small-pox 0.37 per mille of population as compared to 1.21 in the previous year. The following statement gives mortality figures due to Small-pox by districts as compiled from the vital statistical returns and it is probable that these figures also include deaths from Measles and Chicken-pox:

		Deaths under one year	Deaths between the age of one to ten.	Total number of deaths
	1	2	3	4
Cachar	6	13	62
Sylhet	114	231	1,834
Goalpara	80
Kamrup	22	72	621
Darrang	5	2	67
Nowgong	15	15	149
Sibsagar	76	112	807
Lakhimpur	3	...	218
Khasi and Jaintia Hills	6
Naga Hills
Lushai Hills	2
Garro Hills	6
Manipur State	Not known	...
Sadya Frontier Tract	36
Balipara Frontier Tract
Total	241	445	3,888

57. *Government Vaccine Depot, Shillong.*—This report on the working of the Vaccine Depot refers to the financial year 1945-46.

During the year, the total amount of vaccine lymph manufactured was 2,624,797 doses or 25,216 grams as compared to 29,34,723 doses or 29,164 grams in the preceding year. The number of doses issued to all indentors, Civil and Military, within and outside the Province, was 2,578,718 during the year as compared to 2,872,695 during 1944.

During the year, 714 Cow Calves, 19 Buffalo Calves and 25 Rabbits were used as compared to 1,097 Cow Calves and 20 Buffalo Calves during the previous year. Out of 714 Calves hired during 1945-46, 66 Calves were used for potency tests, 36 became sick, 25 failed and 7 produced unsatisfactory vesicles. Lymph was taken from the remaining 582 Calves, and the average yield of vaccine lymph per calf during the year was 4,510 doses or 43.31 grams as compared to 3,974 doses or 39.46 grams during the previous year. The cost of manufacture per dose amounted to 4.56 pies during the year as compared to 5.38 pies in the previous year. All the batches were tested for potency and sterility before despatch and gave uniformly satisfactory results. Field tests on children gave 100 per cent. insertion success.

The total working cost of the Vaccine Depot was Rs.62,408 during the year as compared to Rs.82,247 during 1944, and the total income from sale of Vaccine Lymph was Rs. 54,559.

Dr. P. C. Barooah continued in subordinate charge of the Depot during the year. He was sent for a month's training in the modern technique of vaccine lymph manufacture at the King Institute, Guindy, Madras. Dr. Barooah's work has been entirely satisfactory and appreciable improvement in some directions was effected during the year, e.g., increase in the yield of pulp per calf, and reduction in sickness and in the average cost of production.

CHAPTER—XIV

Other Public Health Services

58. *Industrial hygiene*.—No improvement in the housing conditions of industrial labour was affected during the year. Regular inspection of factories was carried out by the Assistant Directors of Public Health, who are also *ex-officio* additional Inspector of factories and suggestions made for the improvement of sanitary conditions. The general standard of industrial health and hygiene remains unsatisfactory except in some of the larger Tea Estates and in the oil industry at Digboi and the Cement Factory at Chhattak. The worst offenders are the rice and oil mills.

59. *Mines*.—No mines were inspected by any of the Public Health staff during the year.

60. *Food adulteration*.—During 1945, a total of 422 samples of food-stuffs received and analysed by the Public Analyst as compared to 156 during 1944. Of the total number of samples received by the Provincial Public Health Laboratory, 309 were received from the Municipal Boards, 17 from Local Boards 27 from Town Committees and 69 from other sources. The samples analysed were Mustard oil (261), Milk (81), Ghee (36), Atta and Maida (14), Butter (7), Dal (5), Tea (4), Sugar (3), Salt and Rice (2 each) and Cocogem, Groundnut Oil, Orange bitters, Turmeric (1 each). Of these, 246 samples or 53 per cent. were found adulterated. The percentage of adulteration in respect of Mustard oil was 57 per cent. Ghee 47 per cent. Milk 79 per cent. Atta and Maida 28 per cent. and Butter 57 per cent. The number of convictions secured by the Local Bodies under Assam Pure Food Act was approximately 131 and the total approximate amount imposed as fines was Rs.6,105 as compared to 92 and Rs.2,300 during 1944. In addition, a number of cases were locally disposed of with a warning.

From the following local bodies, samples of food-stuffs as given against each were received during the year.

Municipal Boards

Barpeta (7), Dhubri (42), Dibrugarh (8), Gauhati (17), Goalpara (7), Jorhat (7), Karimganj (34), Golaghat (12), Maulvibazar (24), Nowgong (4), Shillong (61), Silchar (42), Sylhet (23), Sibsagar (4), Habiganj (7), Tezpur (6) and Tinsukia (3).

Local Boards

Habiganj (1), Maulvibazar (1), North Lakhimpur (5), Sibsagar (7), Sunamganj (2) Tezpur (1).

Town Committee

Doom Doma (5), Hailakandi (4), Mangaldai (4), Nazira (1), Nalbari (4), Palasbari (3), Srimangal (1).

The comparatively small number of samples sent for analysis by the local bodies does not convey a true picture of the extent of food adulteration prevalent all over the Province.

The revision of the Assam Pure Food Act, so as to make it more effective, is under contemplation.

61. *Provincial Public Health Laboratory*.—During the year 1945, there was increased work on the analytical side; a total number of 424 food-stuffs were examined as against 156 in the previous year. The laboratory has now been fairly well equipped with apparatus and chemicals for the purpose of undertaking chemical examination of various articles including articles coming under excise regulations, *e.g.*, liquors, opium, etc. The preparation of injectable Hydnocarpus Oil (Hydnocreol) used for the treatment of Leprosy was successfully undertaken and supplied to the health staff all over the Province.

Besides the analysis of food-stuffs 195 samples of water were examined bacteriologically during the year. The Shillong water supply (which is not chlorinated) was examined at regular intervals, in all 60 samples were tested and the water was found to maintain a satisfactory standard of purity. Water from the Municipal supplies of Jorhat, Tezpur, Gauhati, Dhubri, Sylhet, Silchar and Haflong were collected by the sample taker of the laboratory for Chemical and Bacteriological analysis. At the request of the Excise Department, samples of water from Excise Ware Houses located at Nazira, Tinsukia, Chaparmukh, Srimangal were examined at the Laboratory and necessary recommendations made.

Altogether 261 Vaccine Lymph were bacteriologically tested during the year. This work was latter transferred to the Pasteur Institute, which has better facilities for elaborate bacteriological work.

The Laboratory continued to act as the Departmental Depot for the supply of Ureastibamine and Collin Syringe parts. 34,855 grammes Ureastibamine was distributed during the year.

Miscellaneous Chemical Examination and research work.—It was found that Groundnut oil and Vegetable Ghee are widely used for adulterating Mustard Oil and Ghee respectively. After the addition of known quantities of Groundnut Oil or Vegetable Ghee as adulterants, Chemical data were obtained for the purpose of judging whether it was possible to make skilful mixtures so as to evade the Assam Pure Food Rules, 1934, and attempts were made to evolve supplementary tests for the detection of such skilful adulteration. During the investigation it was found that Buffalo-Ghee skilfully adulterated with about 20 per cent. Vegetable-Ghee resembles the prescribed standard for Cow-Ghee except for the Butgro-refractometer reading at 40°C.

Experiments were made on the estimation of free fatty acids for judging the degree of rancidity in Ghee and Butter. In a fresh sample of Ghee this value was about 1.8 per cent. as compared to 2.6 to 5.6 per cent. in rancid samples.

CHAPTER—XV

62. *General Remarks*.—The general health conditions in the Province were fairly satisfactory throughout the year. Price levels became steadier and the supply more regular though the quantity and quality of food-stuffs was still much below normal requirements. The steady decline in the birth-rate since 1942 appears to have been checked this year. Infantile mortality-rate was the lowest so far recorded. Although Malaria did not prevail in epidemic form in any part of the Province, the loss of life due to "Fever" remained as high as ever. Free distribution of Anti-Malaria Drugs was extended to all affected areas. Shortage of staff was felt in all activities of the Department. The Assam Medical Research Society was wound up during the year and a Malaria Section under the Public Health Department set up.

63. *Research Work*.—Naga Sore enquiry sponsored by Indian Research Fund Association was continued under the Director, Pasteur Institute, and further progress was made in the epidemiology and bacteriology of the disease during the year. No other research work was carried out by any staff of the Department.

64. *Public Health Legislation*.—No legislation bearing on Public Health was taken up during the year. Arrangements are being made for the Revision of the Assam Pure Food Act. The question of framing a Public Health Act will be taken up when the staff situation improves.

65. *Personal*.—The executive and ministerial staffs of the Department continued to discharge their duties loyally and satisfactorily. I must specially acknowledge the untiring assistance given to me in the compilation of this Report by Mr. D. C. Das, M. A., Statistician.

Captain S. C. Dutta, B. SC., M.B., D.P.H., A.I.R.O., reverted from Military duty to his substantive post of Assistant Director of Public Health during January, 1945.

Dr. Sribas Das, the Research Officer of the Assam Medical Research Society was appointed Malariologist with effect from 1st August, 1945.

A departure was made from the previous practice of placing an Assistant Surgeon incharge of the Provincial Public Health Laboratory and Mr. B. K. Dutta Roy, M. SC., was appointed Public Analyst for Assam and Officer incharge, Provincial Public Health Laboratory.

I attended the Administrative Medical Officers' Conference, New Delhi during November, 1945. I was incharge of the Department through the year.

SHILLONG :

The 4th December, 1946. }

T. D. AHMAD,
Major I. M. S.,

Director of Public Health, Assam.

STATEMENT No. I—Statement showing the births registered in the districts of Assam during the year 1945

No.	Districts	Estimated population			Grand total number of births registered			Ratio of births per 1,000 of population			Number of males born to every 100 females born	Mean ratio of births per 1,000 during the previous five years		
		Male	Female	Total	Male	Female	Total	Male	Female	Total		Male	Female	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	SURMA VALLEY													
1	Cachar ...	334,327	299,772	634,099	7,802	7,072	14,874	12.30	11.16	23.46	111	14.79	13.96	28.76
2	Sylhet ...	1,718,923	1,567,658	3,286,581	32,893	30,205	63,098	10.01	9.19	19.20	109	13.47	12.51	26.18
	Total ...	2,053,250	1,867,430	3,920,680	40,695	37,277	77,972	10.38	9.51	19.89	109	13.85	12.75	26.60
	ASSAM VALLEY													
3	Goalpara ...	569,407	501,875	1,071,282	9,256	7,951	17,207	8.64	7.42	16.06	116	13.16	12.24	25.40
4	Kamrup ...	742,763	645,999	1,388,762	6,093	9,518	15,611	4.39	6.85	11.24	64	6.32	5.80	12.12
5	Darrang ...	427,915	374,730	802,645	7,335	6,807	14,142	9.14	8.48	17.62	108	11.54	10.90	22.44
6	Nowgong ...	415,150	359,875	775,025	5,009	4,627	9,636	6.46	5.97	12.43	108	8.48	7.68	16.16
7	Sibsagar ...	602,788	533,231	1,136,019	10,149	9,312	19,461	8.93	9.67	18.60	109	11.48	10.96	22.44
8	Lakhimpur ...	522,433	446,188	968,621	7,566	7,037	14,603	7.81	7.27	15.08	108	10.92	10.42	21.34
	Total ...	3,280,456	2,861,898	6,142,354	45,408	45,252	90,660	7.39	7.36	14.75	100	10.18	9.55	19.73
	Total for the province.	5,333,706	4,729,328	10,063,034	86,103	82,529	168,632	8.55	8.21	16.76	104	11.65	10.81	22.46

STATEMENT No. II—Statement showing the deaths registered in the districts of Assam during the year 1945

No.		Districts	Area in square miles	Average population per square mile	Number of deaths registered			Deaths per 1,000 of population from—										Mean ratio of deaths per 1,000 during the previous five years		
					Male	Female	Total	Cholera	Small-pox	Plague	Fevers	Dysentery and Diarrhoea	Respiratory diseases	Injuries	• All other causes	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
SURMA VALLEY																				
1	Cachar	1,978	321	6,588	6,099	12,687	·17	·10	...	10·60	1·78	·84	·17	6·34	19·71	20·35	20·00	20·81	21·76	21·08
2	Sylhet ...	5,478	599	27,806	25,199	53,005	·61	·56	...	10·11	1·07	·26	·15	3·37	16·18	16·07	16·13	20·58	19·75	20·54
	Total	7,456	526	34,394	31,298	65,692	·54	·48	...	10·19	1·18	·35	·16	3·75	16·75	16·76	16·75	20·61	19·59	20·32
ASSAM VALLEY																				
3	Goalpara	3,969	270	8,199	6,632	14,831	·04	·07	...	13·05	·05	·02	·02	·59	14·40	13·21	13·84	19·07	17·95	18·98
4	Kamrup	3,840	362	5,218	4,832	10,050	·19	·45	...	5·23	·27	·11	·06	·93	7·02	7·48	7·24	8·92	8·99	8·96
5	Darrang	2,804	286	5,852	5,407	11,259	·19	·08	...	9·83	·94	·48	·13	2·38	13·67	14·43	14·03	17·38	19·01	18·14
6	Nowgong	3,898	199	3,473	3,034	6,507	·16	·29	...	5·37	·69	·19	·07	1·73	8·37	8·43	8·40	11·98	12·39	12·17
7	Sibsagar	5,128	221	7,771	7,805	15,576	·28	·71	...	8·21	1·39	·57	·14	2·41	12·89	14·64	13·71	13·15	14·07	13·92
8	Lakhimpur	4,156	233	5,512	5,109	10,621	·01	·23	...	5·58	·95	·84	·18	3·18	10·55	11·45	10·97	13·77	15·37	14·49
	Total	23,795	258	26,025	32,819	68,844	·15	·32	...	7·82	·69	·35	·10	1·77	10·98	11·47	11·20	13·78	14·27	14·01
	Total for the province.	31,251	322	70,419	64,117	134,536	·30	·38	...	8·74	·88	·35	·12	2·60	13·20	13·56	13·37	16·45	16·59	16·54

STATEMENT No. III—Deaths registered in the districts of Assam during each month of the year 1945

No.	Districts	Estimated Population	January	February	March	April	May	June	July	August	September	October	November	December	Total deaths registered during the year 1945
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	Cachar	23,306 610,793	31 1,329	23 885	16 806	19 888	26 1,071	14 1,310	17 935	20 980	23 915	24 1,140	10 1,090	15 1,100	238 12,449
2	Sylhet..	71,264 3,215,317	201 6,537	56 5,688	54 4,145	55 3,986	67 4,184	47 3,832	36 4,139	38 3,130	57 3,535	50 4,087	51 4,617	50 4,363	762 52,243
3	Goalpara	3,286,581	6,738	5,744	4,199	4,041	4,251	3,879	4,175	3,168	3,592	4,137	4,668	4,413	53,005
4	Kamrup	36,655 1,034,627	51 1,153	28 1,124	28 1,315	27 1,111	27 1,260	37 1,231	22 1,493	33 1,122	38 1,178	24 1,041	43 1,287	42 1,116	400 14,431
5	Darrang	1,071,282	1,204	1,152	1,343	1,138	1,287	1,268	1,515	1,155	1,216	1,065	1,330	1,158	14,831
6	Nowgong	60,946 1,327,816	68 1,121	54 490	72 456	61 669	61 796	63 1,176	60 865	74 735	74 1,026	35 504	69 571	59 891	750 9,300
7	Sibsagar	1,388,762	1,189	544	528	730	857	1,239	925	809	1,100	539	640	950	10,050
8	Lakhimpur	14,844 787,810	29 597	14 482	12 698	6 944	14 1,008	13 1,109	19 1,275	14 881	21 764	15 1,097	17 1,008	38 1,184	212 11,047
		802,645	626	496	710	950	1,022	1,122	1,294	895	785	1,112	1,025	1,222	11,259
		14,081 760,944	23 523	18 417	21 330	21 369	21 581	15 492	18 450	31 543	17 716	27 591	21 663	16 553	249 6,258
		775,025	546	465	351	390	602	507	468	574	733	618	684	569	6,507
		30,274 1,105,745	19 709	14 700	14 1,025	6 975	18 1,172	7 1,635	35 1,817	15 1,468	18 1,425	17 1,528	14 1,565	11 1,369	188 15,388
		1,136,019	728	714	1,039	981	1,190	1,642	1,852	1,483	1,443	1,545	1,579	1,380	15,576
		40,217 928,404	39 905	24 574	17 750	15 754	41 770	21 722	46 788	22 899	34 849	11 858	32 1,128	35 1,287	337 10,284
		968,621	944	598	767	769	811	743	834	921	883	869	1,160	1,322	10,621
	Total for the towns ..	291,587	461	231	234	210	275	217	253	247	282	203	257	266	3,136
	Ratio per mille for towns ..	..	18.61	10.32	9.45	8.76	11.10	9.05	10.22	9.97	11.77	8.20	10.72	10.74	10.75
	Total for the rural circles	9,771,447	12,874	10,390	9,525	9,696	10,842	11,507	11,762	9,758	10,408	10,846	11,929	11,863	1,31,400
	Ratio per mille for rural circles	..	15.31	13.86	11.47	12.07	13.06	14.32	14.17	11.76	12.96	13.07	14.85	14.29	13.45
	Total for the province ..	10,063,034	13,335	10,621	9,759	9,906	11,117	11,724	12,015	10,005	10,690	11,049	12,186	12,129	134,536
	Ratio per mille for the province ..	..	15.60	13.76	11.41	11.97	13.01	14.17	14.06	11.71	12.92	12.93	14.73	14.19	13.37

STATEMENT No. IV.

R.—TOWNS																																							
Suma Valley																																							
1	Silchar	..	1	2	3	4	1	5	..	..	..	11	..	..	..	5	14	19	5	5	2	3	3	1	2	7	18	15	18	12	14	10	16	5	19	17	103	89
2	Mailakandi	..	1	..	1	2	..	2	4	5	2	7	1	2	3	2	3	5	1	1	1	1	1	5	5	22	15
3	Haflong	..	..	1	1	..	..	..	1	1	1	..	..	1	1	2	1	3	1	1	..	..	..	..	..	..	..	..	..	1	1	..	..	..	2	..	6	3
4	Sylhet	..	13	4	17	11	3	14	4	4	23	4	4	8	34	23	62	10	18	6	10	5	8	7	7	9	17	13	15	10	4	10	6	26	29	130	143		
5	Maulvibazar	1	1	1	..	2	2	1	3	3	3	5	3	..	1	1	1	..	1	3	1	3	1	7	5	6	5	4	1	31	22
6	Karimganj	..	4	..	4	5	1	6	..	1	..	..	..	1	1	4	7	11	4	4	..	3	..	2	2	..	7	5	6	5	6	2	7	4	5	10	44	37
7	Habiganj	..	10	3	13	6	1	7	2	1	3	8	2	1	1	18	13	31	9	12	3	4	1	1	1	1	5	6	2	7	4	8	2	8	5	17	14	78	62
8	Sunamganj	..	8	1	9	2	4	6	1	5	6	11	1	1	15	17	32	14	21	3	4	7	3	4	5	12	8	9	11	15	5	8	4	16	15	103	93		
9	Srimangal	..	1	..	1	..	..	..	1	1	1	1	1	1	2	2	4	1	..	1	1	1	1	1	1	..	3	1	..	3	..	1	1	..	1	1	13	7
Asam Valley																																							
1	Dhubri	..	3	3	6	1	..	1	7	9	7	8	..	..	23	8	31	12	9	9	7	4	4	4	9	2	25	9	16	8	17	5	12	3	4	13	131	68
2	Goalpara	..	..	..	..	..	..	..	..	12	9	18	12	9	21	21	18	39	12	9	7	9	8	6	5	2	3	3	2	2	2	..	..	1	12	7	72	57
3	Gauripur	..	3	..	3	1	2	3	6	5	3	6	4	5	3	10	10	20	10	7	7	4	..	1	3	4	1	2	2	5	3	2	3	38	34
4	Gauhati	..	5	4	9	7	3	10	19	9	4	13	..	..	28	21	49	8	19	9	10	6	7	8	13	36	29	26	10	26	7	15	8	14	13	186	137	
5	Barpeta	..	2	3	5	..	3	3	8	9	6	15	..	5	5	14	14	28	16	34	4	7	15	2	3	..	15	6	12	7	13	5	5	4	56	77	153	156	
6	Palasbari	..	2	1	3	1	2	3	6	5	1	6	5	2	7	13	6	19	4	8	5	5	1	1	..	4	2	2	..	1	3	4	2	2	..	..	30	33
7	Nalbari	..	1	..	1	..	..	..	1	2	4	6	..	..	3	4	7	5	1	7	2	12	3	..	3	3	2	1	1	1	3	2	2	1	..	..	36	19
8	Tezpur	..	9	1	10	4	..	4	14	6	5	11	2	2	4	18	11	29	4	4	3	5	9	5	5	8	25	11	17	5	20	4	17	2	14	17	132	72	
9	Mangaldai	..	1	..	1	..	1	1	2	..	1	1	1	..	2	2	4	..	..	..	..	..	..	..	1	..	..	..	..	1	1	1	1	..	..	5	3	
10	Nowgong	..	9	2	11	8	4	12	23	17	11	28	3	2	5	31	25	56	9	14	8	8	5	3	5	5	21	10	24	10	20	..	16	6	16	13	135	94	
11	Jorhat	..	2	..	2	..	1	1	3	1	..	3	1	..	1	5	2	7	3	5	4	3	..	1	2	2	5	3	6	4	5	..	6	4	6	3	42	27	
12	Sibsagar	..	1	1	2	2	..	1	1	1	..	1	3	1	4	1	6	3	1	..	2	2	1	2	6	2	1	1	1	6	5	24	19
13	Nazira	..	1	..	1	1	..	1	2	3	1	4	1	1	2	5	3	8	3	4	1	2	2	..	..	1	1	..	..	2	3	2	1	2	3	1	19	17
14	Golaghat	..	..	1	1	1	1	2	3	..	..	..	1	1	2	2	2	4	2	1	1	1	..	5	..	2	4	3	3	3	..	4	2	1	3	4	21	19
15	Dibrugarh	..	5	3	8	8	3	11	19	9	6	15	6	6	12	23	23	46	6	3	3	3	6	..	5	7	23	20	28	7	19	8	7	4	9	6	129	81	
16	Tinsukia	..	5	2	7	..	1	1	8	3	..	3	4	2	6	14	3	17	4	..	4	3	1	4	1	2	..	2	4	1	2	2	5	2	6	2	41	21	
17	Doom Dooma	..	1	2	3	1	3	4	7	1	3	4	1	..	1	5	7	12	4	2	1	1	2	1	1	..	1	2	..	1	6	2	1	3	..	24	16		
18	North Lakhimpur	..	..	1	1	1	2	2	3	..	..	..	1	1	2	2	3	5	3	1	..	2	..	..	..	2	2	2	2	2	1	1	1	1	2	13	12	
Total for the towns.		88	35	123	63	37	100	223	117	90	207	69	58	127	309	248	557	154	193	96	94	94	53	75	78	222	163	220	116	212	81	153	72	247	257	1,781	1,355		
Ratio per mille ..		..	..	..	..	..	..	..	..	..	..	..	..	..	101.98	94.58	98.53	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total for the province.		2,859	2,418	5,277	2,212	2,030	4,242	9,519	3,963	3,526	7,489	2,615	2,385	5,000	11,855	10,153	22,008	9,964	9,353	5,670	5,070	3,727	3,052	3,620	4,006	6,019	8,305	7,095	6,978	6,487	4,935	4,902	4,184	10,079	8,161	70,419	64,117		
Ratio per mille ..		..	..	..	..	..	..	..	..	..	..	..	..	..	137.68	123.02	130.51	16.15	15.38	6.62	6.45	5.70	6.34	8.25	9.52	6.52	8.88	9.66	10.65	14.23	13.01	17.14	18.40	51.10	51.65	13.20	13.37	

The age-groups have been worked out from the percentages of age distribution amongst the T sample of the population of the plain districts during 1941 census.

STATEMENT No. IV(a)—Showing mortality under one year by classes in the district of Assam for the year 1945

Districts	Hindus		Muslims		Christians		Buddhists		Other classes	
	Number	Ratio per 1,000 births	Number	Ratio per 1,000 births	Number	Ratio per 1,000 births	Number	Ratio per 1,000 births	Number	Ratio per 1,000 births
Cachar	1,016	...	955	...	...	...	...	...	4	...
Sylhet	3,822	...	5,171	...	32	...	...	...	10	...
Goalpara	1,521	...	1,327	...	38	...	...	...	24	...
Kamrup	1,190	...	138	...	...	...	...	...	25	...
Darrang	1,584	...	183	...	89	...	...	...	98	...
Nowgong	614	...	150	...	...	...	...	...	85	...
Sibsagar	2,059	...	21	...	13	...	3	...	67	...
Lakhimpur	1,295	...	93	...	93	...	1	...	287	...
Total	13,101	...	8,038	...	265	...	4	...	600	...

STATEMENT No. V.—Deaths registered according to class in the districts of Assam during the year 1945

Number of deaths registered										Ratio of deaths per 1,000 of population																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
Hindus			Muslims			Christians			Buddhists			Other classes			Hindus			Muslims			Christians			Buddhists			Other classes																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
Districts	Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		Male		Female		Total		Male		Female		Total																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	Male	Female	Total	Europeans and Anglo Indians		Total of Christians		Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
				Male	Female	Male	Female																									Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male

STATEMENT No. VI.—Deaths registered from different causes in the districts and towns of the Province of Assam during the year 1945

No.	Districts and towns	Births			Deaths from—														Ratio of deaths per 1,000 of population												
		Births			Birth-rate	Cholera	Small-pox	Plague	Fevers	Dysentery and diarrhoea	Respiratory diseases	Injuries						All other causes	Total	Cholera	Small-pox	Plague	Fevers	Dysentery and diarrhoea	Respiratory diseases	Injuries	All other causes	Total for the year	Mean of previous five years		
		Male	Female	Total								Wounds and accidents	Snakes	Wild animals	Rabies	Total															
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
DISTRICTS EXCLUDING TOWNS																															
Surma Valley																															
1	Cachar ..	610,793	7,623	6,886	14,509	23.75	107	58	..	6,673	1,091	503	8	5	85	1	..	1	100	3,917	12,449	.17	.09	..	10.92	1.73	.82	.16	6.49	20.38	21.55
2	Sylhet ..	2,215,317	32,113	29,543	61,656	19.17	1,971	1,811	..	33,005	3,443	818	40	30	398	11	2	..	481	10,714	52,243	.61	.56	..	10.26	1.07	.25	.14	3.36	16.25	20.24
	Total ..	3,826,110	39,736	36,429	76,165	19.91	2,078	1,869	..	39,678	4,534	1,321	48	35	483	12	2	1	581	14,631	64,692	.54	.49	..	10.37	1.18	.34	.15	3.84	16.91	20.45
Assam Valley																															
3	Goalpara ..	1,034,627	8,842	7,612	16,454	15.90	36	74	..	13,726	38	11	5	1	7	1	1	1	16	530	14,431	.03	.07	..	13.27	.04	.01	.01	.52	13.95	18.16
4	Kamrup ..	1,327,816	5,402	8,941	14,343	10.80	239	591	..	7,033	360	110	22	11	42	..	6	1	82	945	9,300	.18	.44	..	5.29	.22	.08	.06	.73	7.00	8.70
5	Darrang ..	787,801	7,148	6,660	13,808	17.53	152	62	..	7,845	733	358	11	12	51	7	13	2	96	1,801	11,047	.19	.08	..	9.96	.93	.45	.12	2.29	14.02	17.97
6	Nowgong ..	760,944	4,772	4,410	9,182	12.07	122	149	..	4,100	499	117	3	5	26	..	4	..	38	1,233	6,258	.16	.19	..	5.38	.65	.15	.05	1.64	8.22	12.04
7	Sibsagar ..	1,105,745	9,914	9,097	19,011	17.19	319	803	..	9,234	1,564	633	14	12	97	7	26	1	157	2,678	15,388	.28	.72	..	8.35	1.41	.57	.14	2.44	13.91	13.61
8	Lakhimpur ..	928,404	7,258	6,758	14,016	15.09	14	216	..	5,287	877	767	9	4	103	3	31	11	161	2,962	10,284	.01	.23	..	5.69	.94	.82	.17	3.21	11.07	12.14
	Total ..	5,945,337	43,336	43,478	86,814	14.60	882	1,895	..	47,225	4,011	1,996	64	45	326	18	81	16	550	10,149	66,708	.15	.32	..	7.94	.67	.34	.09	1.71	11.22	13.96
Total for districts excluding towns		9,771,447	83,072	79,907	162,979	16.68	2,960	3,764	..	86,903	8,545	3,317	112	80	809	30	83	17	1,131	24,780	131,400	.30	.38	..	8.89	.87	.34	.11	2.56	13.45	16.24

TOWNS																													
Surma Valley																													
1	Silchar	18,131	141	147	288	15·88	1	4	..	39	30	22	..	9	..	1	10	86	192	·05	·22	..	2·15	1·65	1·21	·55	4·76	10·59	18·72
2	Hailakandi	3,552	34	37	71	19·99	1	..	..	9	8	..	..	..	..	..	..	19	37	·28	..	..	2·53	2·25	..	..	5·35	10·41	16·85
3	Haflong	1,623	4	2	6	3·69	..	..	..	4	1	..	..	..	..	..	..	4	9	..	..	..	2·46	·62	..	..	2·46	5·54	12·56
4	Sylhet	31,027	372	319	691	22·27	4	..	..	57	32	24	..	2	..	..	2	153	272	·12	..	..	1·84	1·03	·77	·06	4·95	8·77	12·31
5	Maulvibazar	6,422	41	50	91	14·17	1	14	..	13	3	1	..	..	..	..	..	21	53	·15	2·18	..	2·02	·47	·15	..	3·28	8·25	7·62
6	Karimganj	8,732	74	46	120	13·74	2	..	..	14	10	3	..	8	..	1	9	43	81	·23	..	..	1·60	1·14	·34	1·01	4·96	9·28	20·65
7	Habiganj	13,711	118	88	206	15·02	7	2	..	38	18	5	..	4	..	..	4	66	140	·51	·14	..	2·77	1·31	·36	·29	4·83	10·21	14·47
8	Sunamganj	8,420	152	139	291	34·56	21	7	..	96	8	2	1	2	..	..	3	59	196	2·49	·83	..	11·40	·95	·24	·36	7·01	23·28	26·51
9	Srimangal	2,952	23	20	43	14·57	..	..	..	8	1	3	..	..	..	..	..	8	20	..	..	..	2·71	·34	1·01	..	2·71	6·77	18·33
Total		94,540	959	843	1,807	19·10	37	27	..	278	111	60	1	25	..	2	28	459	1,000	·39	·28	..	2·93	1·17	·63	·29	4·88	10·57	12·62
Assam Valley																													
10	Dhubri	22,399	210	136	346	15·44	3	6	..	99	18	10	..	12	..	..	12	51	199	·13	·26	..	4·42	·80	·44	·52	2·31	8·88	13·17
11	Goalpara	8,391	145	132	277	33·01	..	..	..	111	..	..	..	..	..	..	..	18	129	..	..	..	13·22	..	..	..	2·15	15·37	22·46
12	Gauripur	5,865	59	71	130	22·17	..	..	..	46	..	..	..	..	..	..	..	24	72	..	..	..	7·84	..	·34	..	4·10	12·28	19·45
13	Gauhati	32,978	263	216	479	14·52	24	12	..	71	38	22	..	4	..	..	4	152	323	·73	·36	..	2·15	1·15	·67	·12	4·61	9·79	11·71
14	Barpeta	20,499	327	283	610	29·75	..	8	..	104	34	15	..	..	..	..	..	148	309	..	·39	..	5·07	1·65	·73	..	7·23	15·07	17·15
15	Palasbari	3,796	66	51	117	30·82	..	10	..	36	12	4	..	..	..	..	..	1	63	..	..	2·63	..	3·16	1·05	..	·27	16·59	14·88
16	Nalbari	3,676	35	27	62	16·88	..	..	..	27	4	..	..	..	..	..	..	24	55	..	..	..	7·35	1·09	..	..	6·53	14·97	18·43
17	Tezpur	12,577	161	133	294	23·37	..	5	..	47	23	27	..	13	..	..	14	88	204	..	·39	..	3·73	1·83	2·14	1·11	7·02	16·22	28·07
18	Mangaldai	2,267	26	14	40	17·64	..	..	..	3	1	..	..	..	..	..	..	4	8	..	..	..	1·32	·45	..	1·76	3·53	19·01	28·07
19	Nowgong	14,081	237	217	454	32·24	5	..	..	60	39	32	..	14	..	..	15	98	249	·35	..	..	4·26	2·77	2·27	1·06	6·97	17·68	19·15
20	Jorhat	13,103	97	74	171	13·05	1	4	..	24	7	4	..	1	..	..	1	28	69	·07	·31	..	1·83	·53	·31	·07	2·14	5·26	12·10
21	Sibsagar	7,945	46	50	96	12·08	..	..	..	7	3	5	..	..	..	..	..	28	43	..	..	..	·88	·38	·62	..	3·53	5·41	9·87
22	Nazira	3,418	27	39	66	19·31	..	..	..	27	4	2	..	..	..	..	..	3	36	..	..	..	7·90	1·17	·58	..	·88	10·53	12·60
23	Golaghat	5,808	65	52	117	20·14	..	..	..	30	4	4	..	..	..	..	..	2	40	..	..	..	5·16	·69	·69	..	·35	6·89	27·94
24	Dibrugarh	25,123	176	190	366	14·57	..	1	..	48	31	39	..	13	..	..	13	78	210	..	·03	..	1·91	1·23	1·55	·52	3·12	8·36	16·96
25	Tinsukia	9,716	74	49	123	12·66	..	..	..	29	8	5	..	2	..	..	2	18	62	..	..	..	2·98	·82	·51	·21	1·86	6·38	5·19
26	Doom Dooma	2,298	32	20	52	22·63	..	..	..	24	3	3	..	..	..	..	..	10	40	..	..	..	10·44	1·31	1·31	..	4·35	17·41	4·61
27	North Lakhimpur.	3,080	26	20	46	14·93	..	1	..	18	1	..	..	1	..	..	1	4	25	..	·32	..	5·84	·32	..	·32	1·32	8·12	12·10
Total		197,017	2,072	1,774	3,876	19·52	33	47	..	811	230	174	..	2	60	..	62	779	2,136	·17	·24	..	4·12	1·17	·88	·31	3·95	10·84	14·01
Total for the towns.		291,587	3,031	2,622	5,653	19·38	70	74	..	1,089	341	234	1	2	85	..	90	1,238	3,136	·24	·25	..	3·73	1·17	·80	·31	4·25	10·75	15·27
Total for the province.		10,063,034	86,103	82,529	168,632	16·76	30,30	3,838	..	87,992	8,886	3,551	113	82	894	30	1,221	26,018	134,536	·30	·38	..	8·74	·88	·35	·12	2·60	13·37	16·54

SUPPLEMENTARY (OPTIONAL) STATEMENT VI(a) FOR THE YEAR 1945

	Towns	Cerebro-spinal fever		Typhus fever		Enteric fever		Measles		Relap-sing fever		<i>Kala azar</i>		Influenza		Black water fever		Other fevers		Dysen-tery		Diar-rhoea		Pneumo-nia		Palmo-nary Tubercu-losis		Whoop-ing cough		Other respira-tory diseases		
		Death	Ratio	Death	Ratio	Death	Ratio	Death	Ratio	Death	Ratio	Death	Ratio	Death	Ratio	Death	Ratio	Death	Ratio	Death	Ratio	Death	Ratio	Death	Ratio	Death	Ratio	Death	Ratio	Death	Ratio	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16															
Silchar	4	..	..	5	..	..	15	..	11	..	2	..	..	..	11	..	19	..	11	..	11	..	2	..	..	..	..	..
Hailakandi	8	..	1	..	..	..	..	..	..	..	7	..	..	..	..	..	..	..	..	..	..	..
Hailong	1	..	..	..	..	..	..	..	..	..	..	..
Sylhet	13	2	..	2	..	..	31	..	12	..	11	..	..	..	20	..	20	..	12	..	11	..	2	..	1	..	10	..	
Maulvibazar	..	1	..	..	..	..	..	..	..	12	..	..	..	..	..	..	..	12	..	3	..	..	..	..	..	..	..	..	1	..	..
Karimganj	1	12	..	..	..	..	3	..	3	..	..	..	..	..	3	..	7	..	3	..	2	..	..	..	..	..	1	..	
Habiganj	2	..	..	..	..	..	19	..	6	..	..	..	..	..	19	..	12	..	6	..	4	..	..	..	..	1	..	..
Sunamganj	1	..	..	..	1	..	..	92	..	..	..	..	..	..	..	92	..	6	..	2	..	..	..	1	..	1	..	..	..
Srimangal	3	..	..	..	..	..	..	1	..	..	..	..	..	..	..	1	..	1	..	..	1	..	..	..	..	2	..	..	..
Dhubri	8	..	..	..	..	..	..	..	..	..	..	..	..	11	..	7	..	7	..	2	..	1	..	..	..
Goalpara	2	..	..	..	..
Gouripur	
Gauhati	1	2	4	1	3	..	..	50	..	15	..	17	..	..	..	50	..	38	..	15	..	17	..	..	..	5	..	..	..

STATEMENT No. VII.—Deaths registered from Cholera in the districts of Assam during each month of the year 1945

No.	Districts	Circles of Registration		Villages		January	February	March	April	May	June	July	August	September	October	November	December	Total			Ratios of deaths per 1,000 of population			Mean ratio of previous 5 years
		Number in each district	Number from which deaths from cholera were reported	Number in each district	Number from which deaths from cholera were reported													Male	Female	Total	Male	Female	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	Surma Valley	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	Cachar	13	11	1,175	79	3	1	2	31	48	20	4	...	...	...	...	...	69	40	109	21	13	17	.61
	Sylhet	43	40	11,449	1,352	352	428	255	236	305	191	104	43	24	28	14	26	1,097	909	2,006	64	58	61	1.28
	Total	56	51	12,624	1,431	355	429	257	267	353	211	108	43	24	28	14	26	1,166	949	2,115	57	51	54	1.17
3	Assam Valley	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	Goalpara	20	7	3,765	51	2	...	3	1	...	11	2	...	5	13	2	...	31	8	39	05	02	04	.71
5	Kamrup	19	12	2,865	*	...	6	4	32	49	95	6	25	31	4	7	4	136	127	263	18	20	19	.99
6	Darrang	15	10	2,037	108	...	...	5	60	55	9	15	8	...	...	...	...	86	66	152	20	18	19	.73
7	Nowgong	13	10	2,391	110	7	4	9	36	19	26	7	6	5	...	5	3	75	52	127	18	14	16	1.56
8	Sibsagar	17	13	2,324	*	...	77	4	66	107	30	13	4	1	12	1	5	156	164	320	26	31	28	.24
	Lakhimpur	17	4	2,596	12	1	...	2	...	9	...	...	...	...	1	...	1	8	6	14	01	01	01	.19
	Total	101	56	15,978	281	10	87	27	195	239	171	43	43	42	30	15	13	492	423	915	15	14	15	.70
	Total for the province.	157	107	28,602	1,712	365	516	284	462	592	382	151	86	66	58	29	39	1,658	1,372	3,030	31	29	30	.89

Number of villages from the 1941 census.
* Figure, not available.

STATEMENT No. VIII.—Deaths registered from Small-pox in the districts of Assam during each month of the year 1945

No.	Districts	Circles of Registration		Villages		January	February	March	April	May	June	July	August	September	October	November	December	Total			Number of deaths amongst children		Ratio of deaths per 1,000 of population			Mean ratio of population of previous five years	
		Number in each district	Number from which deaths from small-pox were reported	Number in each district	Number from which deaths from small-pox were reported													Male	Female	Total	Under 1 year	One to 10 years	Male	Female	Total		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
	Surma Valley																										
1	Cachar	13	8	1,175	50	12	7	6	21	4	2	...	9	1	...	...	...	36	26	62	6	13	11	08	10	23
2	Sylhet	43	38	11,449	1,052	330	266	259	309	230	140	124	30	51	44	25	26	977	857	1,834	114	231	57	55	56	55	
	Total	56	46	12,624	1,102	342	273	265	330	234	142	124	39	52	44	25	26	1,013	883	1,896	120	244	49	47	48	49	
	Assam Valley																										
3	Goalpara	20	10	3,765	37	9	12	15	3	6	3	7	9	...	...	13	3	49	31	80	...	...	09	06	07	10
4	Kamrup	19	16	2,865	*	84	27	45	80	96	113	48	12	67	1	15	33	326	295	621	22	72	44	46	45	24	
5	Darrang	15	12	2,037	24	7	6	8	3	19	10	6	5	...	3	...	...	34	33	67	5	2	08	09	08	08
6	Nowgong	13	10	2,391	*	12	7	12	41	53	24	...	...	...	...	...	...	85	64	149	15	15	20	18	19	61
7	Sibsagar	17	13	2,324	80	39	113	72	109	163	95	94	46	27	13	13	23	374	433	807	76	112	62	81	71	08	
8	Lakhimpur	17	14	2,596	195	41	8	47	95	...	...	...	1	...	14	6	6	114	104	218	3	...	22	23	23	15
	Total	101	75	15,978	336	192	173	199	331	337	245	155	73	94	31	47	65	982	960	1,942	121	201	30	33	32	20	
	Total for the Province.	157	121	28,602	1,438	534	446	464	661	571	387	279	112	146	75	72	91	1,995	1,843	3,838	241	445	37	39	38	31	

*Figures not available.

STATEMENT NO. IX. — Deaths registered from Fevers in the districts of Assam during each month of the year 1945

No.	Districts	Circles of registrations		Villages		January	February	March	April	May	June	July	August	September	October	November	December	Total			Ratio of deaths per 1,000 of population			Mean ratio per 1,000 of previous five years
		Number in each district	Number from which deaths from fever were reported	Number in each district	Number from which deaths from fever were reported													Male	Female	Total	Male	Female	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Surma Valley																								
1	Cachar ..	13	13	1,175	587	678	451	368	437	612	833	591	545	479	623	571	537	3,650	3,075	6,725	10.91	10.26	10.60	10.82
2	Sylhet ..	43	42	11,449	10,132	3,922	3,536	2,530	2,298	2,597	2,599	2,824	2,221	2,365	2,737	2,987	2,615	17,842	15,389	33,231	10.38	9.82	10.11	11.23
Total ..		56	55	12,624	10,719	4,600	3,987	2,898	2,735	3,209	3,432	3,415	2,766	2,844	3,360	3,558	3,152	21,492	18,464	39,956	10.47	9.89	10.19	11.53
Assam Valley																								
3	Goalpara ..	20	19	3,765	3,765	1,166	1,105	1,211	1,130	1,260	1,119	1,490	960	1,165	986	1,299	1,091	7,581	6,401	13,982	13.31	12.75	13.05	16.82
4	Kamrup ..	19	18	2,865	*	899	492	339	474	518	879	748	646	764	421	467	714	3,680	3,591	7,271	4.95	5.56	5.23	6.07
5	Darrang ..	15	14	2,037	843	448	373	417	654	735	909	980	655	545	655	693	831	4,246	3,649	7,895	9.92	9.74	9.83	10.70
6	Nowgong ..	13	12	2,391	888	384	347	221	252	420	350	225	365	389	287	487	433	2,215	1,945	4,160	5.34	5.40	5.37	7.88
7	Sibsagar ..	17	16	2,324	*	359	391	675	467	504	1,144	1,304	983	992	891	872	740	4,843	4,479	9,322	8.03	8.40	8.21	7.62
8	Lakhimpur ..	17	17	2,596	460	241	211	437	363	605	532	575	449	514	337	558	584	2,916	2,490	5,406	5.58	5.58	5.58	7.36
Total ..		101	96	15,978	5,956	3,497	2,829	3,300	3,340	4,042	4,933	5,322	4,058	4,369	3,577	4,376	4,393	25,481	22,555	48,036	7.76	7.88	7.82	9.28
Total for the Province		157	151	28,602	16,675	8,097	6,816	6,198	6,075	7,251	8,365	8,737	6,824	7,213	6,937	7,934	7,545	46,973	41,019	87,992	8.81	8.67	8.74	10.08

* Figures not available.

STATEMENT No. X.—Deaths registered from Dysentery and Diarrhoea in the districts of Assam during each month of the year 1945

No.	Districts	Circles of registration		Villages		January	February	March	April	May	June	July	August	September	October	November	December	Total			Ratio of deaths per 1,000 of population			Mean ratio per 1,000 of population of previous five years
		Number in each district	Number from which deaths from Dysentery and Diarrhoea were reported	Number in each district	Number from which deaths from Dysentery and Diarrhoea were reported													Male	Female	Total	Male	Female	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
<i>Surma Valley</i>																								
1	Cachar	13	12	1,175	137	97	75	75	88	136	124	75	85	92	104	96	83	621	509	1,130	1·85	1·69	1·78	1·87
2	Sylhet	43	42	11,449	2,075	458	436	262	262	281	229	266	187	237	261	332	304	1,923	1,592	3,515	1·12	1·01	1·07	1·13
Total		56	54	12,624	2,212	555	511	337	350	417	353	341	272	329	365	428	387	2,544	2,101	4,645	1·24	1·12	1·18	1·25
<i>Assam Valley</i>																								
3	Goalpara	20	7	3,765	77	2	1	..	..	9	2	6	12	12	9	2	1	33	23	56	·06	·05	·05	·55
4	Kamrup	19	17	2,865	*	60	24	29	16	15	38	28	32	61	28	28	29	125	263	388	·17	·41	·27	·38
5	Darrang	15	14	2,037	100	45	47	54	54	88	81	63	42	36	110	58	79	409	348	757	·95	·93	·94	1·70
6	Nowgong	13	12	2,391	145	49	22	25	30	65	47	28	40	65	86	50	31	278	260	538	·67	·72	·69	·61
7	Sibsagar	17	16	2,324	*	67	51	65	91	134	122	178	180	122	197	202	173	698	884	1,582	1·16	1·65	1·39	1·33
8	Lakhimpur	17	16	2,596	48	60	37	53	68	53	58	39	107	101	102	114	128	477	443	920	·91	·99	·96	1·46
Total		101	82	15,978	370	283	182	236	259	364	348	342	413	397	532	454	441	2,020	2,221	4,241	·61	·77	·69	·90
Total for the province...		157	136	28,602	2,582	838	693	563	609	781	701	683	685	726	897	882	828	4,564	4,322	8,886	·86	·91	·88	1·04

* Figures not available.

STATEMENT No.XI.—Death registered from Respiratory diseases in the districts of Assam during each month of the year 1945

No.	Districts	Circle of registration		Villages		January	February	March	April	May	June	July	August	September	October	November	December	Total			Ratio of deaths per 1,000 of population			Mean ratio per 1,000 of population of previous five years
		Number in each district	Number from which deaths from respiratory diseases were reported	Number in each district	Number from which deaths from respiratory diseases were reported													Male	Female	Total	Male	Female	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	Surma Valley Cachar ..	13	10	1,175	154	60	54	54	39	36	39	30	35	34	38	60	56	329	206	535	.98	.69	.84	1.11
2	Sylhet ..	43	41	11,449	584	71	75	64	53	61	32	56	70	85	74	107	108	565	291	856	.33	.18	.26	.35
	Total ..	56	51	12,624	738	131	129	118	92	97	71	86	105	119	112	167	164	894	497	1,391	.43	.27	.35	.47
3	Assam Valley Goalpara ..	20	7	3,765	113	5	3	..	..	..	..	1	1	2	6	5	..	17	6	23	.02	.01	.02	.18
4	Kamrup ..	19	15	2,865	*	18	14	24	2	8	6	12	12	15	12	13	15	104	47	151	.14	.07	.11	.17
5	Darrang ..	15	14	2,037	19	22	23	49	39	20	19	54	15	18	41	36	49	230	155	385	.54	.41	.48	.61
6	Nowgong ..	13	10	2,391	20	17	13	4	10	7	4	12	16	35	13	7	11	94	55	149	.22	.15	.19	.19
7	Sibsagar ..	17	14	2,324	*	61	37	46	38	49	55	44	50	44	74	83	67	355	293	648	.59	.55	.57	.80
8	Lakhimpur..	17	16	2,596	65	74	70	54	72	43	57	41	67	53	61	100	122	446	368	814	.85	.82	.84	1.16
	Total ..	101	76	15,978	217	197	160	177	161	127	141	164	161	167	207	244	264	1,246	924	2,170	.38	.32	.35	.51
	Total for the province.	157	127	28,602	955	328	289	295	253	224	212	250	266	286	319	411	428	2,140	1,421	3,561	.40	.30	.35	.49

* Figures not available.

STATEMENT No. XII.—Deaths registered from plague in the districts of Assam during each month of the year 1945

No.	Districts	Circles of Registration		Villages		January	February	March	April	May	June	July	August	September	October	November	December	Total			Ratio of deaths per 1,000 of population			Mean ratio of previous five years
		Number of each districts	Number from which deaths from plague were reported	Number from each districts	Number from which deaths from plague were reported	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Male	Female	Total	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1	Surma Valley	13	...	1,175	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2	Cachar	43	...	11,449	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Sylhet	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Total	56	...	12,624	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
3	Assam Valley	20	...	3,765	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
4	Goalpara	19	...	2,865	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
5	Kamrup	15	...	2,037	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
6	Darrang	13	...	2,391	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
7	Nowgong	17	...	2,324	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
8	Sibsagar	17	...	2,596	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Lakhimpur	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Total	101	...	15,978	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Total for the Province.	157	..	28,602	..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

APPENDIX I

PROVINCIAL

Statement showing details of registration in compulsory areas

Compulsory registration area	Estimated Population	Estimated births at 288 per 1,000 married women between age of 15 and 40	Number of births registered during the year	Estimated births-rate per mille	Registered births-rate per mille	Number of deaths registered during the year		Death-rate per mille		Number of prosecution under Act IV (B. C.) of 1883	Number of conviction
						in deaths Including hospital	in deaths Excluding hospital	in deaths Including hospital	in deaths Excluding hospital		
1	2	3	4	5	6	7	8	9	10	11	12
Silchar ...	18,131	Not available	288	Not available	15·88	192	185	10·59	10·20	...	...
Hailakandi ...	3,552		71		19·99	37	37	10·41	10·41	...	...
Haflong ...	1,623		6		3·69	9	8	5·54	4·93	...	...
Sylhet ...	31,027		691		22·27	272	268	8·77	8·64	5	...
Maulvibazar ...	6,422		91		14·17	53	51	8·25	7·94	...	...
Karimganj ...	8,732		120		13·74	81	81	9·28	9·28	...	...
Habiganj ...	13,711		206		15·02	140	140	10·21	10·21	...	...
Sunamganj ...	8,420		291		34·56	196	196	23·28	23·28	...	...
Srimangal ...	2,952		43		14·57	20	20	6·77	6·77	...	...
Dhubri ...	22,399		346		15·44	199	195	8·88	8·71	...	...
Goalpara ...	8,391		277		33·01	129	127	15·37	15·13	...	...
Gauripur ...	5,865		130		22·17	72	72	12·28	12·28	...	...
Gauhati ...	32,978		479		14·52	323	287	9·79	8·70	...	...
Barpeta ...	20,499		610		29·75	309	306	15·09	14·92	...	...
Palasbari ...	3,796		117		30·82	63	63	16·59	16·59	...	...
Nalbari ...	3,673		62		16·88	55	55	14·97	14·97	...	...
Tezpur ...	12,577		294		23·37	204	197	16·22	15·66	13	...
Mangaldai ...	2,267		40		17·64	8	7	3·52	3·08	...	...
Nowgong ...	14,081		454		32·24	249	236	17·68	16·76	18	...
Jorhat ...	13,103		171		13·05	69	61	5·26	5·03	...	...
Sibsagar ...	7,945		96		12·08	43	41	5·41	5·16	...	...
Nazira ...	3,418		66		19·31	36	36	10·53	10·53	...	...
Golaghat ...	5,808		117		20·14	40	35	6·89	6·02	...	...
Dibrugarh ...	25,569		366		14·57	210	195	8·36	7·62	...	...
Tinsukia ...	9,716		123		12·66	62	58	6·38	5·96	...	...
Doom Dooma...	2,298		52		22·63	40	40	17·41	17·41
North Lakhimpur.	3,080		46		14·93	25	24	8·12	7·79

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APPENDIX III

Table showing Maternity and Child Welfare Centres. Health Visitors and Trained Mid-wives in Rural and Urban Areas in Assam during 1945

Districts		Maternity and Child Welfare Centres maintained by—										Staff			
		Government		Local and municipal bodies		Other Agents		Trained visitors		Trained mid-wife		Trained Dhais			
Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural		
1	2	3	4	5	6	7	8	9	10	11	12	13			
Cachar	1	..	..	..	2	..	3	3	..		
Sylhet	3	..	..	..	6	7	7	4	..		
Goalpara	1	..	..	..	1	..	..	2	..		
Kamrup		
Darrang	1	..	1	..	..	..	..	..	..
Nowgong	1	..	1	..	..	..	..	..	..
Sibsagar	1	..	1	..	..	..	..	..	..
Lakhimpur	3	..	..	..	..
Khasi and Jaintia Hills	1	..	1	..	..	..	..	..	..
Naga Hills		
Lushai Hills		
Garo Hills	1	..	..	..	..	..	..	..	..
Sadiya Frontier Tract		
Manipur State		
Total	10	..	4	..	12	7	10	..	..

VACCINATION STATEMENT No.I.

A.—VACCINATION DEPARTMENT

VACCINATION STATEMENT No. I.—Showing particulars of vaccination in the province of Assam during the year 1945

No.	Districts or towns	1	2	3	Primary vaccination including Secondary							Re-vaccination			Percentage of success among the verified operations		Successfully vaccinated children under one year as a percentage of total births during the year
					Successful				Total among the unverified primary and secondary vaccinations	Unsuccessful	Total including unverified vaccinations	Successful	Unsuccessful	Total operations including unverified operations	Primary plus Secondary	Re-vaccination	
					Under one year	One to five years	Five to ten years	Total									
DISTRICTS (EXCLUDING TOWNS)																	
Surma Valley and Hill Division																	
1	Silchar Subdivision	..	..	..	1,153	7,017	1,715	9,887	211	10,125	17,832	12,167	32,016	42,141	97.91	59.44	18.35
2	Haflong Subdivision	..	..	..	253	1,320	757	2,330	169	2,723	1,151	744	2,758	5,481	93.23	60.73	7.90
3	Hailakandi Subdivision	..	..	..	620	6,005	869	7,494	73	7,965	20,446	4,881	27,960	35,925	99.03	80.73	..
4	Sylhet Subdivision	..	..	..	2,508	12,292	4,678	19,707	847	23,134	17,563	14,756	38,362	61,496	95.87	54.62	18.50
5	Maulvibazar Subdivision	..	..	..	3,840	9,314	4,786	17,940	200	19,503	19,345	15,902	40,645	60,148	98.89	54.88	36.85
6	Karimganj Subdivision	..	..	..	2,542	15,689	3,713	22,044	374	22,567	48,709	10,188	59,769	82,336	98.33	82.70	27.16
7	Habiganj Subdivision	..	..	..	3,980	30,050	4,097	38,127	444	39,076	31,782	4,154	38,903	77,979	98.84	88.44	24.95
8	Sunamganj Subdivision	..	..	..	1,439	13,146	2,470	17,145	1,193	21,071	18,814	14,202	45,521	66,592	93.49	56.98	15.37
9	Shillong Subdivision	..	..	..	1,941	6,699	1,390	10,030	5	10,035	13,166	9,556	23,254	33,289	99.95	57.94	..
10	Jowai Subdivision	..	..	..	1,765	1,879	1,240	4,884	2	4,886	3,134	1,325	6,109	10,995	99.96	63.19	..
11	Naga Hills District	..	..	..	1,649	3,113	304	5,066	629	6,054	9,364	4,516	14,547	20,601	88.95	67.46	..
12	Lushai Hills District	..	..	..	894	3,270	1,255	5,419	1,111	6,973	5,273	3,983	11,454	18,427	82.98	56.97	..
Total Surma Valley and Hill Division		22,586	109,794	27,274	160,073	5,258	174,112	206,779	96,874	341,298	515,410	96.82	68.09	..

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A.—VACCINATION DEPARTMENT

VACCINATION STATEMENT No. I.—Showing particulars of Vaccination in the Province of Assam during the year 1945

No.	Districts or Towns	Estimated population	Primary vaccination including secondary						Re-vaccination			Total operation including un-verified operation	Percentage of success among the verified operations		Successfully vaccinated children under one year as a percentage of the total births during the year 1945
			Successful				Unsuccessful	Total including unverified primary and secondary vaccination	Successful	Unsuccessful	Total including unverified operation		Primary plus secondary	Re-vaccination	
			Under 1 year	1 to 5 years	5 to 10 years	Total									
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
B.—TOWNS Surma Valley and Hill Division															
1	Silchar	18,131	153	48	..	201	..	252	418	1,612	11,111	11,363	100.00	37.62	53.12
2	Hailakandi	3,552	4	33	..	37	..	37	53	16	94	131	100.00	77.94	5.41
3	Hailong	1,623	8	19	..	27	7	34	222	127	534	568	79.41	63.67	..
4	Sylhet	31,027	230	171	5	406	13	429	336	2,274	2,829	3,258	96.89	12.87	33.28
5	Karimganj	8,734	59	12	5	86	5	99	481	196	694	793	94.50	71.64	49.16
6	Maulvi Bazar	6,422	61	..	..	61	..	61	202	609	811	872	100.00	24.90	67.03
7	Srimangal	2,952	7	16	..	23	..	23	21	35	56	79	100.00	37.50	16.28
8	Habiganj	13,711	35	166	..	219	2	224	1,606	936	2,660	2,884	99.69	63.17	16.99
9	Sunanganj	8,420	60	102	38	208	34	274	320	333	763	1,037	85.95	49.04	20.61
10	Shillong	45,511	200	124	100	424	..	424	15	35	1,829	2,253	100.00	37.50	33.5
11	Jowai	Not available.	24	8	2	34	..	34	..	..	..	34	100.00	..	..
12	Kolima	3,832	..	18	..	18	..	23	80	79	250	273	100.00	50.31	..
Total of Surma Valley and Hill Division ..		143,913	841	717	150	1,744	61	1,914	3,754	6,252	21,631	23,545	96.62	37.52	..

Assam Valley Division																		
13	Lhubri	..	..	..	..	219	222	28	469	..	470	3,162	53	3,254	3,724	100.00	98.35	63.29
14	Goalpara	..	..	..	..	120	82	..	202	..	202	..	..	17	219	100.00	..	43.32
15	Gauripur	..	..	..	..	93	36	..	129	9	138	238	417	710	848	93.47	36.33	71.54
16	Gauhati	..	..	..	..	206	224	13	443	11	454	675	209	1,210	1,664	97.37	76.35	59.53
17	Barpeta	..	..	..	..	184	144	1	327	1	352	11	13	46	398	99.69	45.83	30.16
18	Palashbari	..	..	..	..	46	143	..	189	12	261	495	429	2,221	2,422	94.02	53.59	39.31
19	Nalbari	..	..	..	..	40	50	..	99	1	96	85	59	385	481	98.90	59.02	64.51
20	Tezpur	..	..	..	..	98	40	1	139	9	148	417	546	1,240	1,388	93.91	43.30	33.33
21	Mangaldai	..	..	..	..	13	13	..	26	1	27	7	..	7	34	96.20	100.00	32.22
22	Nowgong	..	..	..	..	279	179	11	469	7	476	1,130	1,178	2,321	2,797	98.52	48.96	61.45
23	Jorhat	..	..	..	..	43	21	..	64	4	76	467	120	697	773	94.11	79.55	25.15
24	Sibsagar	..	..	..	..	40	42	..	82	..	82	435	2,581	3,016	3,098	100.00	14.42	41.66
25	Golaghat	..	..	..	..	30	28	..	58	..	82	24	113	137	219	100.00	17.57	25.64
26	Nazira	..	..	..	..	90	73	..	172	6	179	144	75	266	445	96.62	65.75	..
27	Dibrugarh	..	..	..	..	154	235	3	392	16	408	1,710	557	2,312	2,720	97.07	75.43	42.06
28	Tinsukia	..	..	..	..	59	33	4	96	2	98	82	81	190	288	97.95	50.30	47.96
29	Doom Dooma	..	..	..	..	31	1	..	32	..	32	606	307	1,065	1,097	100.00	65.08	59.61
30	North Lakhimpur	..	..	..	..	13	14	..	27	..	27	84	264	248	275	100.00	24.13	28.26
31	Tura	..	..	..	..	29	17	..	46	1	44	46	30	75	122	97.87	59.14	..
Total of Assam Valley Division																		
32	Imphal	..	..	..	..	1,787	1,597	61	3,452	80	3,595	9,818	7,032	19,417	23,012	97.73	58.26	..
33	Sadiya Frontier Tract..	..	..	..	..	Known.	..	..	..	..	..	..	..	..	..	..	..	..
Total of Towns																		
Total of Vaccine Department																		
Total of Dispensary staff																		
Total of Tea Gardens																		
Total of Jails, Mental Hospital, Infectious diseases Hospital's, Police Hospital, Government vaccinations in Lakhimpur District																		
Total of Railway Dispensaries .																		
Shillong Vaccine Depot ..																		
Grand total ..																		

B.—DISPENSARY VACCINATION

STATEMENT No. II.—*Showing Dispensary Vaccination in the Province of Assam during the year 1945*

District	Primary vaccination including secondary										Re-vaccination			Percentage of success among the verified operations		Percentage of unknown cases to the total cases
	Successful					Unsuccessful	Total including unverified primary and secondary vaccination	Successful	Unsuccessful	Total including unverified vaccination	Total operations including unverified	Primary plus secondary	Re-vaccination			
	Under one year	One to five years	Five to ten years	Total	Total											
														2	3		4	5	6	7	8	9	10	11	12	13	14	15
Cachar	10	8	7	25	10	35	325	204	652	687	71.42	61.44	.00	18.86		
Sylhet	3	19	...	26	...	26	48	...	124	150	100.00	100.00	.00	61.29		
Khasi and Jaintia Hills	280	436	213	929	...	1,019	59	131	7,864	8,883	100.00	31.05	8.83	97.58		
Naga Hills	7	33	...	40	...	40	197	21	1,070	1,110	100.00	89.95	.00	79.62		
Lushai Hills	10	12	...	22	...	22	600	415	1,017	1,039	100.00	59.11	.00	.19		
Goalpara	9	19	8	36	13	49	21	22	43	92	73.47	48.84	.00	.00		
Kamrup	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Darrang	...	7	...	48	15	67	468	632	1,200	1,267	76.19	42.55	5.97	.00		
Nowgong	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Sibsagar	56	169	...	255	40	323	...	38	...	...	86.44	40.63	...	20.98
Lakhimpur	...	...	...	...	...	...	...	...	81	404	...	...	...	...
Garo Hills	30	153	...	183	54	237	...	302	...	...	...	51.60	.00	4.58
Manipur State	...	...	...	...	...	...	...	...	654	871	77.22	...	...	...
Sadiya Frontier Tract	...	49	15	...	25	185	...	33	...	...	...	...	...	...
Balipara Frontier Tract	20	...	...	84	...	...	198	...	255	440	77.06	85.70	38.92	9.41
Total	425	905	243	1,648	157	2,003	2,264	1,798	12,960	14,963	91.36	55.74	9.88	68.65		

Summary

	Total number of operations performed		Percentages of successful cases in which the results were known		Number of children successfully vaccinated			Number of all successful vaccinations performed
	Primary <i>plus</i> secondary	Re-vaccination	Primary <i>plus</i> secondary	Re-vaccination	Under one year	One to five years	Five to ten years	
	2	3	4	5	6	7	8	9
By special staff—								
Districts excluding towns	...	...	...	...	...	...	...	830,948
Towns	...	...	...	...	...	...	...	21,615
Total	393,914	824,035	95.00	64.88	64,660	221,663	53,749	852,563
By Railway dispensaries	5,629	44,907	97.29	53.79	2,687	2,343	221	200
By private Medical Practitioners	399,543	868,942	95.02	64.44	67,347	224,003	53,970	...
By Dispensary staff	122	1,131	93.02	28.36	10	19	11	3,912
By other agencies, Tea Gardens, Jails, Hospital, etc.	...	...	...	...	...	...	...	73,081
Total	2,003	12,960	91.30	55.73	425	905	243	...
Shillong Vaccine Depot	29,066	81,274	93.83	60.74	14,768	6,693	3,976	...
Grand total	31,191	95,365	93.68	64.65	15,203	7,617	4,230	929,756

	430,734	964,307	94.70	64.04	82,550	231,620	58,200	...

STATEMENT No. IV.—*Showing the number of Vaccinations performed in Municipal towns on children under one year of age during the year 1945*

Districts	Towns	Number of births during the year	Number of deaths among children under one year during the year	Number of successful vaccinations on children under one year during the year ending 31st March	Date of extension of Vaccination Act to town
1	2	3	4	5	6
Cachar ...	{ Silchar ...	288	19	153	21st January 1892.
	{ Hailakandi ...	71	7	4	10th November 1922.
	{ Sylhet ...	691	62	230	1st October 1882.
	{ Habiganj ...	206	31	35	11th December 1913.
Sylhet ...	{ Sunamganj ...	291	32	60	28th June 1915.
	{ Karimganj ...	120	11	59	27th July 1915.
	{ Srimangal ...	43	4	7	9th October 1936.
	{ Maulvibazar ...	91	3	61	16th April 1916.
Khasi and Jaintia Hills.	Shillong ...	597	31	200	21st June 1895.
	Total of Surma Valley and Hill Division.	2,398	200	609	
Goalpara ...	{ Dhubri ...	346	31	219	13th February 1891.
	{ Goalpara ...	277	39	120	12th November 1890.
	{ Gauripur ...	130	20	93	15th September 1922.
	{ Gauhati ...	479	49	206	August 1882.
Kamrup ...	{ Barpeta ...	610	28	182	29th October 1915.
	{ Palashbari ...	117	19	46	16th November 1927.
	{ Nalbari ...	62	7	40	9th August 1940.
Darrang ...	{ Tezpur ...	294	29	98	22nd May 1907.
	{ Mangaldai ...	40	4	13	12th October 1916.
Nowgong ...	Nowgong ...	454	56	279	7th April 1897.
	{ Sibsagar ...	96	4	40	21st January 1892.
Sibsagar ...	{ Jorhat ...	171	7	43	12th April 1892.
	{ Golaghat ...	117	4	30	24th March 1892.
	{ Nazira ...	66	8	90	1st December 1916.
Lakhimpur ...	{ Dibrugarh ...	366	46	154	September 1883.
	{ Doom Dooma ...	52	12	31	21st October 1918.
	{ Tinsukia ...	123	17	59	31st August 1932.
	{ North Lakhimpur	46	5	13	22nd June 1932.
	Total of Assam Valley Division.	3,846	385	1,756	
	Total for the province.	6,244	585	2,365	

STATEMENT No. V.—Showing side by side the ratio (per 1,000 of population) of deaths from small-pox and the number of successful vaccinations during the ten years ending 1945

	1936-1937		1937-1938		1938-1939		1939-1940		1940-1941		1941-1942		1942-1943		1943-1944		1944-1945		1945	
	Ratio of deaths from small-pox	Number of successful vaccinations	Ratio of deaths from small-pox	Number of successful vaccinations	Ratio of deaths from small-pox	Number of successful vaccinations	Ratio of deaths from small-pox	Number of successful vaccinations	Ratio of deaths from small-pox	Number of successful vaccinations	Ratio of deaths from small-pox	Number of successful vaccinations	Ratio of deaths from small-pox	Number of successful vaccinations	Ratio of deaths from small-pox	Number of successful vaccinations	Ratio of deaths from small-pox	Number of successful vaccinations	Ratio of deaths from small-pox	Number of successful vaccinations
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Cachar..	·06	28,725	·11	33,434	..	26,863	..	25,321	·002	26,986	·003	36,211	·04	41,354	·31	98,196	·79	89,361	·10	70,410
Sylhet	·25	143,670	·66	167,689	·48	183,301	·66	213,437	·25	137,160	·08	130,789	·05	122,019	·20	231,091	2·01	450,475	·56	261,298
Khasi and Jaintia Hills ..	..	18,992	..	18,384	..	22,983	..	33,128	·04	48,875	·22	41,282	·03	37,843	·71	45,940	·05	45,368	·02	32,675
Naga Hills	..	13,140	..	13,380	..	12,615	..	12,667	..	9,605	..	9,108	·03	15,755	1·17	24,208	..	14,177	..	14,765
Lushai Hills	..	3,083	..	9,156	..	6,508	..	5,469	..	6,663	..	7,494	·02	9,230	..	8,894	·04	11,725	·01	11,314
Goalpara	·03	65,624	·008	54,503	·002	61,342	·62	57,025	·009	54,526	·003	51,576	·04	42,280	·03	51,699	·45	94,565	·07	100,603
Kamrup	·27	55,250	·12	48,556	·08	53,024	·12	62,953	·08	71,807	·05	63,406	·01	56,343	·11	63,201	·95	96,532	·45	67,870
Darrang	·06	49,973	·04	26,107	·04	45,829	·12	46,018	·02	45,711	·01	53,057	·01	65,911	·06	95,035	·28	122,843	·08	86,126
Nowgong	·06	52,967	·35	44,612	·54	45,930	·12	42,547	·06	40,320	·04	39,906	..	33,611	·69	87,226	2·24	142,700	·19	73,543
Sibsagar	·02	42,484	·006	33,770	·03	40,405	·07	38,519	..	45,691	·001	57,286	..	50,423	·02	125,342	·35	80,845	·91	65,463
Lakhimpur	·603	29,148	·006	29,311	·01	30,011	·01	31,540	·01	35,257	·001	40,687	..	45,702	·10	131,679	·64	65,363	·23	99,566
Garó Hills	..	11,484	·005	10,268	..	11,766	·04	12,312	·005	12,680	..	12,771	..	11,197	·08	12,022	·96	10,852	·02	10,338
Manipur State ..	·39	30,042	·22	21,462	·01	19,973	..	19,168	..	20,072	..	20,859	..	23,427	..	28,125	·21	29,270	..	22,118
Sadiya Frontier Tract	..	2,780	..	2,763	..	2,273	..	3,161	..	3,663	·07	6,610	..	3,277	..	5,289	..	2,929	·57	13,317
Balipara Frontier Tract ..	..	456	..	366	..	488	..	396	..	1,553	..	600	..	388	..	380	..	..	..	..
Total	·12	547,920	·25	514,261	·19	562,681	·23	608,661	·09	560,569	·03	571,633	·03	588,760	·17	1,008,327	1·05	1,237,055	·03	929,756

STATEMENT NO. VI.—*Showing the vaccinal conditions of Small-pox patients admitted to hospital, during the year 1945.*

Age	Vaccinated as evidenced by presence of one or more vaccination cicatrices		Stated to have been successfully vaccinated but no vaccination cicatrix present	Stated to be unvaccinated or vaccinated unsuccessfully and no vaccination cicatrix present	Previously unvaccinated but vaccinated during incubation of Small-pox	Stated to have been successfully re-vaccinated	
	Within the last five years	More than five years previously				Within the last five years	More than five years previously
1	2	3	4	5	6	7	8
Under 1 year
1 "
2 "
3 "	1	...	...	...
4 "	1	...	...	...
5 "
6 "	1	...	...	...	...
7 "
8 "	1	...	...	...
9 "
10 "
11 "	1	...	...	...
12 "
13 "
14 "	1	1	...	...	...	1	...
15 "	...	2	1	2	1	...	...
20 "	2	2	1	4	2	1	...
25 "	...	3	...	...	...	2	...
30 "	1	9	...	2	2	5	...
35 "	1	2	...	1	...	...	1
40 "	...	6	...	...	...	4	1
50 "	1
60 "
70 "
80 and upwards
Total ...	5	25	3	13	5	13	3

GOVERNMENT OF ASSAM

ORDERS BY THE GOVERNOR

RESOLUTION ON THE PUBLIC HEALTH REPORT FOR 1945

Extract from the Proceedings of the Government of Assam in the Medical, Department, Public Health Branch, No. MPH.194/46/6, dated the 6th January 1950.

READ :—The Public Health Report for 1945.

R E S O L U T I O N

1. Climatic conditions did not show any marked variation during the year. In most of the districts the rainfall was higher than the previous year. Local flooding occurred in all the plain districts except in Nowgong, Sibsagar and Lakhimpur causing considerable damage to crops in various parts of the Province. The price of common rice was much higher than the pre-war level. The prices of other foodgrains also were much higher in spite of the system of control and it was difficult on the part of the public to pull on even with increased incomes. There was no improvement in living and health conditions in the Province during the year.

2. The method of collection of vital statistics remained the same as in 1944. The birth-rate (16.76 per mille) during the year showed a slight fall from that (16.77) in the previous year; and the death-rate (13.37 per mille) showed a marked fall over the previous year's rate (16.74). All the districts except Cachar recorded death-rates below their quinquennial average. The highest death-rate (20.00) was recorded in the Cachar district and the lowest (7.24) in the Kamrup district. The highest death-rate (29.40) in rural areas was in Jaintiapur circle of Sylhet district and the lowest (1.03) in Sorbhog rural circle of the Kamrup district. The rate of child mortality showed an appreciable fall during 1945 (130.51) in comparison to that of previous year (161.95).

3. Of the prevalent diseases during the year, the chief were Fever, Diarrhoea, Smallpox, Cholera and Respiratory diseases.

Fevers.—Deaths from fevers were mainly due to Malaria, *Kala-azar* and other diseases having fever as the predominant symptom. There was a decrease in the number of deaths from fever in 1945 as compared to that of 1944 the cause of which might be attributed to the subsidence of Malaria in parts of the district of Sylhet. The highest death-rate due to fever was recorded from the Goalpara district. As in previous years, quinine and other anti-malaria drugs, were freely distributed to indigent malaria patients in the badly affected areas throughout the province.

Kala-azar.—The incidence of *Kala-azar* showed a definite trend upwards during the year. The fight against *Kala-azar* had been waged unceasingly but during the war years, both survey and treatment centres had to be curtailed due to lack of doctors. During the year, insecticidal spraying against the sandfly could not be carried out due to lack of co-operation from the patients during cultivating and harvesting periods and the work was confined to early detection and treatment of cases as before.

Cholera.—The incidence of Cholera was comparatively low during 1945, probably as a result of mass immunity affected by the continuous anti-cholera inoculation carried out amongst the people of the infected areas since the last severe epidemic of 1941-43. Propaganda was also continued in order to educate the people in methods of prevention and as a result, Cholera inoculation was becoming more popular amongst the rural masses.

Smallpox.—The incidence of Smallpox showed an appreciable decline in the Province as a whole during the year as compared to that of previous year. There were 3,838 deaths from Smallpox during the year as compared to 11,728 during 1944 and the quinquennial average of 3,092.

Dysentery and Diarrhoea.—The number of deaths from these diseases decreased during the year. A total of 8,856 persons died from these diseases against 11,100 during 1944.

Leprosy.—A total of 795 leprosy cases was treated in the Public Health Department Dispensaries during the year as compared to 786 during 1944. As a result of a survey carried out by the Leprosy Officer in Singimari area in the Nowgong District and Trans-Dikhu area in the Naga Hills, a total of 293 cases of Leprosy (250 in Singimari and 43 in Trans-Dikhu) was detected. The special Leprosy Officer and another Licentiate of the Public Health Department were sent to a Refresher Course in Leprosy at the Calcutta School of Tropical Medicine during 1945. Short courses of instructions were conducted for Leprosy workers at the Government Leper Asylum, Sylhet. Missionary Leper Colonies continued to do excellent work during the year.

Tuberculosis.—The Provincial Tuberculosis Association made further progress in its activities as a result of increased interest and generosity of the public.

Maternity and Child Welfare.—Maternity and Child Welfare work in the Province was still almost entirely under the ægis of the Red Cross Society which had branches in all districts. The Maternity and Child Welfare Centres at Shillong, Silchar, Tezpur, Jorhat and Sylhet did commendable work during the year.

Training of midwives was started during the year at the Ganesh Das Hospital, Shillong. One student was sent to Sir John Anderson Health School, Calcutta, for training as Health Visitor and 4 students were sent to the Dufferin Hospital, Calcutta, for Midwifery training. Ten Welfare Centres functioned during the year under report.

The Post-War Reconstruction Scheme for organising Maternity and Child Welfare work in the Province under the Public Health Department was under the consideration of Government.

Food Adulteration.—The supply of foodstuffs was generally short due to the consequences of the war and adulteration was high. The revision of the Assam Pure Food Act so as to make it effective was under the consideration of Government.

Sale of Quinine.—The sale of Quinine and its substitutes continued to remain under Government control. Distribution of drugs was centralised at the Public Health Laboratory, Shillong, under the supervision of the Director of Public Health. Quinine and other anti-malaria drugs were distributed throughout the Province. Distribution of Mepacrine Tablets through Post Offices in rural areas was also started from the 1st June, 1945.

Public Health Administration.—The creation of the Malaria Section of the Public Health Department to serve as a nucleus and headquarters for the anti-malaria organization was a notable event during the year. An experienced Chemist with a Master's degree in Chemistry and specially trained in food and water analytical and bacteriological work was appointed Public Analyst and Officer-in-Charge, Provincial Public Health Laboratory. Government hoped that the Director of Public Health would manage to get full co-operation and help of the officers in achieving the object of improving the Public Health activities of the Province.

Government take the opportunity of thanking Major T. D. Ahmed, I.M.S., for his efficient administration of the Department.

Order.—Ordered that the Resolution be published in the *Assam Gazette* for general information.

By order of the Governor of Assam,

M. SULTAN,

Secretary to the Government of Assam in the Medical Department.

AGENTS IN INDIA

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